9-1005-200-20+P

This copy is a reprint which includes current pages from Change 1.

TM 9-1005-200-20&P

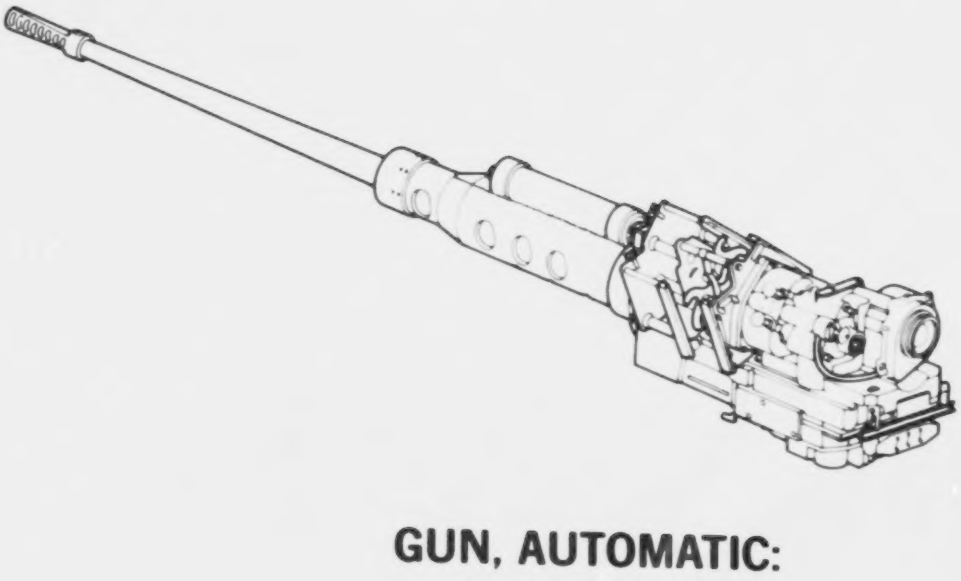
TECHNICAL MANUAL

TROUBLE- SHOOTING	PAGE 2-33

ORGANIZATIONAL MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

MAINTENANCE PROCEDURES	PAGE 2-107

FOR



GUN, AUTOMATIC:
25-MM, M242
(1005-01-086-1400)

MAC	PAGE B-1

RPSTL	PAGE C-1

JANUARY 1985

D 101. 11:

READEX FICHE best copy available

☠ WARNING

The following WARNINGS must be obeyed by all persons handling or working on the gun.

Failure to replace the breech assembly and firing pin at the specified intervals may result in severe injury to personnel and damage to equipment.

Obey all safety rules, regulations, and orders when handling or working with guns.

Gun barrels get very hot and stay hot for a long time after firing. Touching hot gun barrels and parts will cause serious flesh burns. Heat mittens must be worn to prevent burns.

Gun assemblies are heavy. Gun receiver weighs about 41.4 kgs (92 lbs). Gun barrel weighs about 40.5 kgs (90 lbs). Two people are needed to lift each of these heavy assemblies.

Working with lock wire is dangerous and can cause serious injuries. Use eye protection. Control both ends of wire at all times. Hold free ends of wire when cutting to prevent flying pieces.

Dry-cleaning solvent is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

Wear eye protection when removing springs or using striking instruments. You can be blinded if springs or flying chips hit you in the eye. Get medical help immediately if springs or flying chips hit you in the eye.

FIRST AID

For further first aid data, see FM 21-11.

CHANGE
NO. 1

TM 9-1005-200-20&P
C1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 20 May 1987

ORGANIZATIONAL MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

GUN, AUTOMATIC:
25-MM, M242
(1005-01-086-1400)

TM 9-1005-200-20&P, 9 January 1985, is changed as follows:

1. Remove old pages and insert new pages as indicated below.

2. New or changed material is indicated by a vertical bar in the margin of the page.

3. Revised illustrations are indicated by a miniature pointing hand.

4. Warnings on inside front cover of TM are deleted.

Remove Pages	Insert Pages
None	a/(b blank)
A	None
i and ii	i and ii
1-1 thru 1-4	1-1 thru 1-4
1-19 and 1-20	1-19 and 1-20
1-27 thru 1-31/ (1-32 blank)	1-27 thru 1-31/ (1-32 blank)
2-5 thru 2-32	2-5 thru 2-32
(2-43 blank)/2-44	(2-43 blank)/2-44
2-55 and 2-56	2-55 and 2-56
2-65 thru 2-68	2-65 thru 2-68
None	2-68.1 and 2-68.2
2-69 and 2-70	(2-69 blank)/2-70
(2-73 blank)/2-74	(2-73 blank)/2-74
2-107 thru 2-110	2-107 thru 2-110
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2-211 thru 2-214	2-211 thru 2-214
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2-241 and 2-242	2-241 and 2-242
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2-295 thru 2-300	2-295 thru 2-300
2-313 thru 2-320	2-313 thru 2-320
None	2-320.1 thru 2-320.3/(2-320.4 blank)

Remove Pages	Insert Pages	Remove Pages	Insert Pages
2-321 and 2-322	2-321 and 2-322	C-41 and C-42	C-41 and C-42
A-1/(A-2 blank)	A-1/(A-2 blank)	D-1 thru D-4	D-1 thru D-4
B-3 thru B-10	B-3 thru B-10	Index-1 and Index-2	Index-1 and Index-2
(C-7 blank)/C-8	(C-7 blank)/C-8	Index-9 and Index-10	Index-9 and Index 10
C-13 and C-14	C-13 and C-14		
C-17 thru C-28	C-17 thru C-28		

File this change sheet in back of the publication for reference purposes.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-37, Unit Maintenance requirements for IFV Main Gun, BUSHMASTER.

WARNING

The following WARNINGS must be obeyed by all persons handling or working on the gun.

WARNING

Obey all safety rules, regulations, and orders when handling or working with guns.

Gun assemblies are heavy. Gun receiver weighs about 40.8 kgs (90 lbs). Gun barrel weighs about 43.0 kgs (95 lbs). Two people are needed to lift each of these heavy assemblies.

Working with lock wire is dangerous and can cause serious injuries. Use eye protection. Control both ends of wire at all times. Hold free ends of wire when cutting to prevent flying pieces.

Dry-cleaning solvent and Aliphatic Naphtha are flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. Solvent or Naphtha evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation or inflammation.

Wear eye protection when removing springs or using striking instruments. You can be blinded if springs or flying chips hit you in the eye. Get medical help immediately if springs or flying chips hit you in the eye.

FIRST AID

For further first aid data, see FM 21-11.

TECHNICAL MANUAL

No. 9-1005-200-20&P

ORGANIZATIONAL MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

GUN, AUTOMATIC: 25-MM, M242
(1005-01-086-1400)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in back of this manual direct to: Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be furnished to you.

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HOW TO USE THIS MANUAL

GENERAL

Knowing how to use this manual is very important to you.

a. References are to paragraphs in this manual or to other publications.

b. Throughout this manual, text is keyed to the illustrations by use of numbered callouts. When a part or assembly is called out in a procedure, a number in parentheses in the text corresponds with the number on the illustration.

c. Each task begins with a setup page. It tells you what you need to do the task: tools, materials, parts, and other publications. It tells you where to find the troubleshooting references, what must be done to the equipment before you begin the task, and the general safety instructions.

d. In the maintenance procedures, the numbered steps, printed in capital letters, are to be used by an experienced soldier. They are reminders about the order in which a task should be done. The lettered steps are a guide to a soldier who hasn't worked very much on the gun.

INDEXES

This manual is organized to help you quickly find the information you need. There are several useful indexes:

a. Front Cover Index. This is a margin index of often used portions of the manual. To use, bend manual in half and follow the black marker on the front cover to the black marker on the page.

b. Table of Contents. The table of contents lists all chapters, sections, appendixes, and alphabetical index in order and gives page references to where they begin.

c. Symptom Index. The symptom index is a quick guide to the troubleshooting section. Gun checks and common symptoms are listed with a paragraph number to where the checks, inspection, and corrective action procedures can be found.

c. Alphabetical Index. This index, located at the back of this book, is an extensive subject index for the entire manual. The paragraph or page numbers following each entry tell you where in the manual to find a particular subject.

LISTS

This manual contains lists which will help you understand the use of M242 gun nomenclature (names of parts, assemblies, tools, and associated equipment) and some uncommon abbreviations.

a. Nomenclature Cross-Reference List: Throughout this manual, most items (parts, assemblies, and equipment) are referred to by their official nomenclature. In the nomenclature cross-reference list, the items referred to by their common names are listed alphabetically, followed by their official nomenclature.

b. Definitions of Unusual Terms: This is a list of words that may be new to you, or words that may be used in a different way than you know.

c. Metric/US Customary Measurement Conversion Information: Measurements in this manual are given in both metric and US customary units. The table inside the back cover compares metric measurements to their equivalent US customary units. Also provided are conversion factors to convert metric units to US customary units.

CHAPTER 1

INTRODUCTION

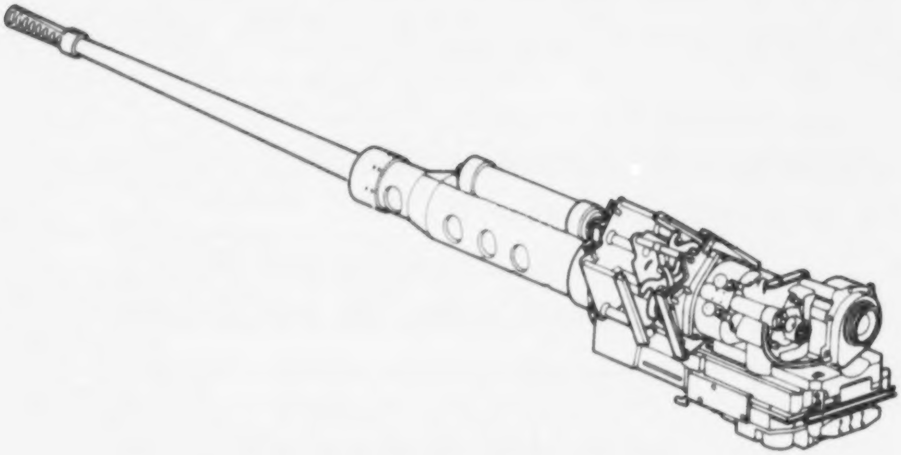
OVERVIEW

This chapter contains general information and equipment description.

Section I - General Information

Section II - Equipment Description and Data

Section III - Principles of Operation



Section I. GENERAL INFORMATION

1-1. SCOPE

a. Type of manual: Organizational Maintenance, including repair parts and special tools list. Maintenance is accomplished with gun removed. All maintenance is bench type without electrical power.

b. Model number and equipment name: M242 25-mm Automatic Gun.

c. Purpose of equipment: To provide protection and fighting capabilities to the vehicle for which it is mounted.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, the Army Maintenance Management System.

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

For destruction of Army materiel to prevent enemy use, refer to DA PAM 750-244-7.

1-4. PREPARATION FOR STORAGE OR SHIPMENT

Refer to Chapter 2, Section VI.

1-5. OFFICIAL NOMENCLATURE, NAMES, AND DESIGNATIONS

This listing includes nomenclature cross-references used in this manual.

NOMENCLATURE CROSS-REFERENCE LIST

Common Name	Official Nomenclature
AP Ammo	Ammunition, Armor Piercing
Barrel	Barrel Assembly
Bullet	Projectile
Cap Screw	Screw, Socket Head Cap
Feeder	Feeder Assembly
Grease	Grease, Molybdenum Disulfide
HE Ammo	Ammunition, High Explosive

1-5. OFFICIAL NOMENCLATURE, NAMES, AND DESIGNATIONS (cont) 1-5

Common Name	Official Nomenclature
Hex Key	Key, Hexagonal, Socket Head Cap Screw
Lock Wire	Wire, Nonelectrical
Motor	1.5 HP DC Motor
Puller	Puller, Mechanical
Punch	Punch, Drive Pin
Receiver	Receiver Assembly
Solvent	Solvent, Dry-Cleaning
Spin Handle	Handle, Socket Wrench, Spin-Style
Spring	Spring, Helical, Compression

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs)

If your gun needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know what you don't like about the design. Tell us why a procedure is hard to perform. Put it on SF 368 (Quality Deficiency Report). Mail it to us at: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD, Rock Island, IL 61299-6000. We'll send you a reply.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES 1-7

a. EXTERNALLY POWERED (EP): An electric motor, located on the bottom and to the rear of the receiver assembly, drives all the moving parts inside the gun. Ammunition feeding, loading and firing, extraction and ejection are all done by the motor. The gun does not depend on barrel recoil or expanding gases for operation. The gun receiver is solidly attached to a rigid mount and does not recoil when the gun is fired. Only the barrel and breech assemblies recoil.

b. SAFETY PROTECTION: The firing pin is cocked just before firing to ensure safe operation during the ram cycle. The bolt is seared (locked in the "open-bolt" position) when the trigger is released. A receiver assembly mechanical interlock system stops the gun with the bolt locked in the breech if there is no recoil (round misfires or hangfires).

c. QUICK-CHANGE CAPABILITY: The gun can be removed from a mount and another gun installed in a short time. Two persons can remove the feeder, barrel, and receiver assemblies quickly.

d. EQUIPMENT DATA:

Caliber	25mm Dual Feed
Ammunition Data	
U.S. Combat	M791 (APDS-T), M792 (HEI-T)
U.S. Target Practice	M793 (TP-T)
European	Oerlikon KBA Type (all)
Muzzle Velocity	
M792, M793	3610 ft/sec (1100 m/sec)
M791	4462 ft/sec (1360 m/sec)
Weight	
Receiver Assembly	90 lb (40.8 kg)
Barrel Assembly	95 lb (43.0 kg)
Feeder Assembly	59 lb (26.7 kg)
Total Gun System	244 lb (110.5 kg)

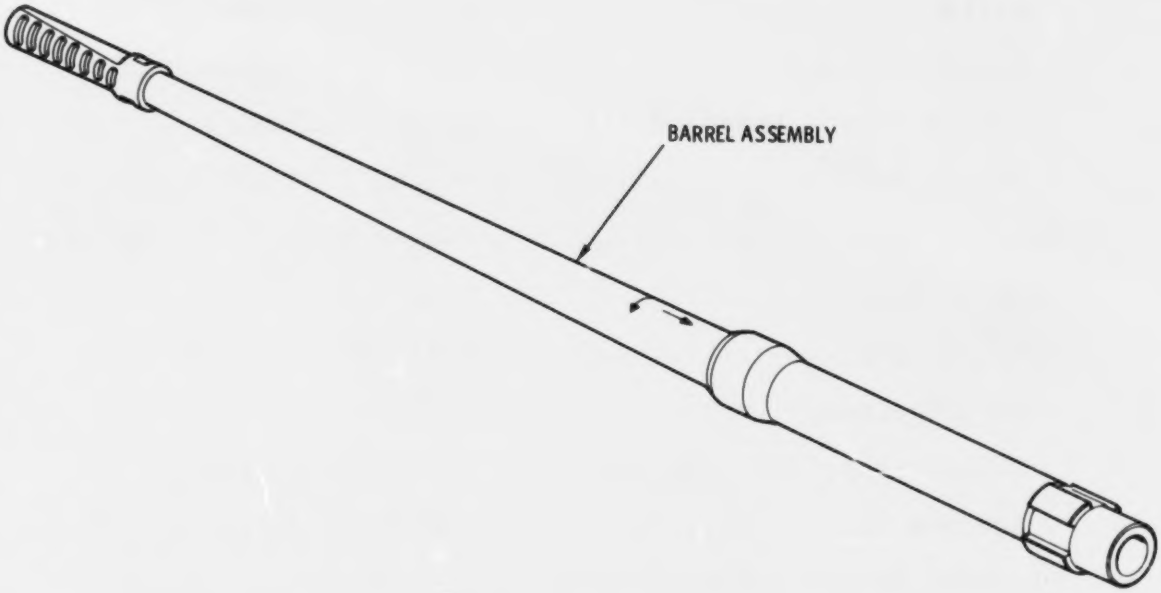
1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES (cont) 1-7

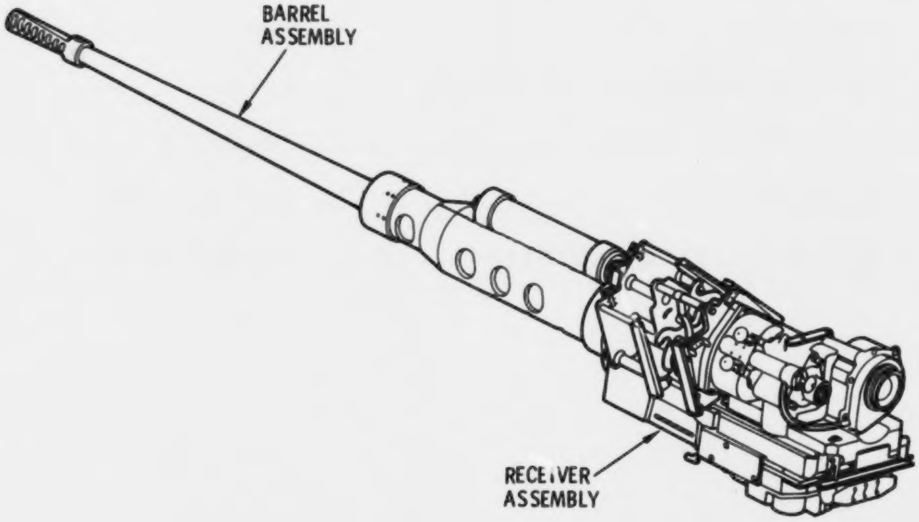
d. EQUIPMENT DATA (cont):

Dimensions	
Length Overall	108.7 in. (2760mm)
Width	13.0 in. (330mm)
Height	15.0 in. (380mm)
Length Behind Front of Feed	21 in. (533mm)
Barrel Length	80 in. (2032mm)
Rate of Fire	Single Shot; 100, 200, 500 spm
Time to Rate	0.15 sec
Time to Stop	0.12 sec
Power Required	
Single Shot, 100, 200 spm	1.5 hp at 28 vdc
500 spm	8.0 hp at 28 vdc
Clearing Method (Cookoff Safe)	Open Bolt
Safety	Absolute Hangfire Protection
Case Ejection	Forward
Peak Recoil Force	10,000 lb (44,448 Newtons)
Dispersion	0.5 mil (18)
Reliability Demonstrated	18,000 MRBF

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS 1-8

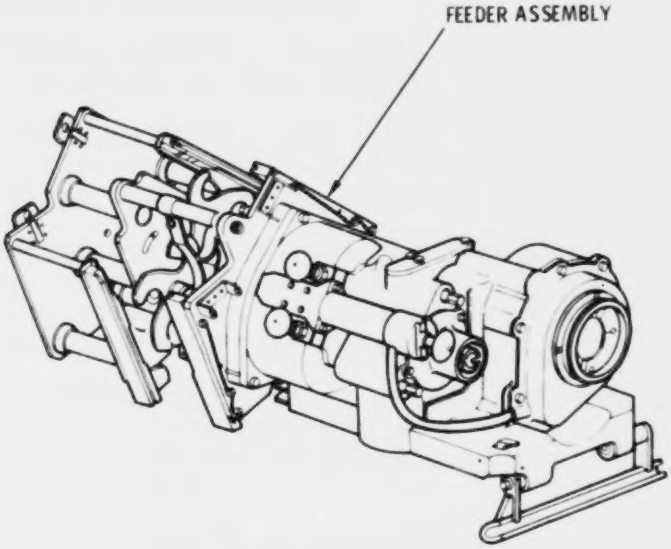
a. BARREL ASSEMBLY: Mounts in front end of receiver assembly.

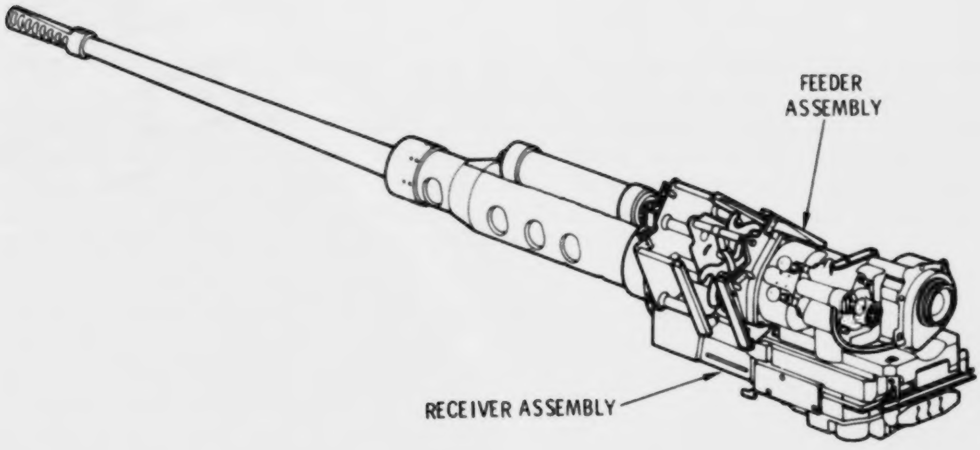

BARREL ASSEMBLY


BARREL ASSEMBLY
RECEIVER ASSEMBLY

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont) 1-8

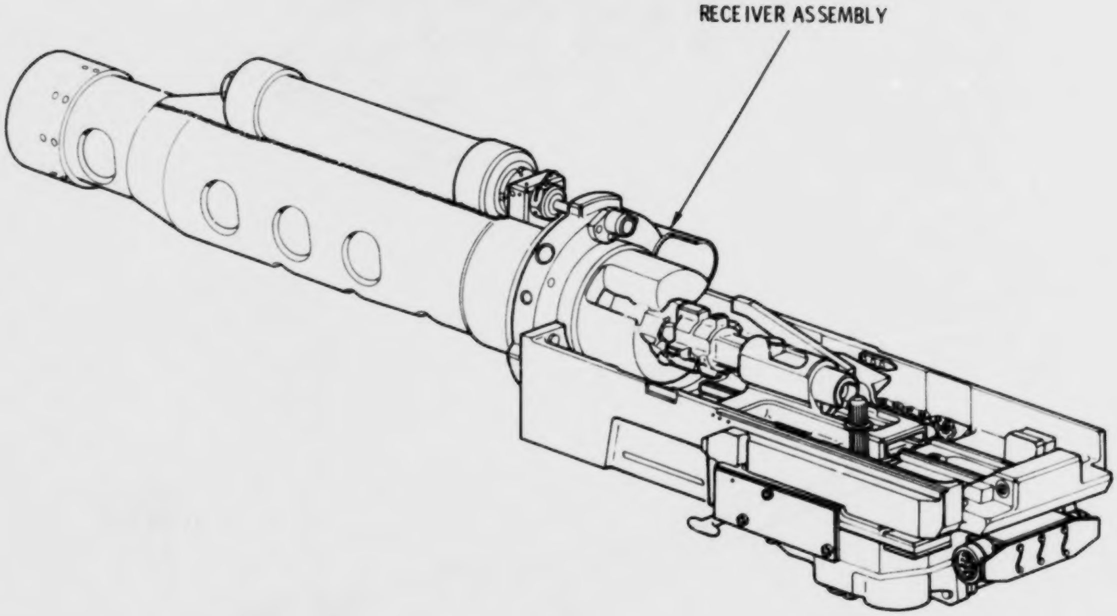
b. FEEDER ASSEMBLY: Mounts on top of receiver assembly.


FEEDER ASSEMBLY


FEEDER
ASSEMBLY
RECEIVER ASSEMBLY

1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont) 1-8

c. RECEIVER ASSEMBLY: Provides a means of securing the gun to a mount.


RECEIVER ASSEMBLY

1-9. SAFETY, CARE, AND HANDLING 1-9

a. SCOPE: This section contains safety warnings, guidelines, and general maintenance instructions. They should be followed when doing maintenance procedures.

b. PREPARATION FOR MAINTENANCE:

(1) PERSONNEL SAFETY. Practice all safety procedures and read all warnings in this manual.

(2) PROPER EQUIPMENT. Get tools and equipment before starting a maintenance task. See INITIAL SETUP requirements on the first page of each maintenance task.

(3) HANDLING TECHNIQUES. Avoid damage to parts during disassembly, cleaning, inspection, repair, and assembly procedures. Nicks, scratches, and dents caused by careless handling could result in equipment failure.

(4) WHAT TO DISCARD. Parts to discard such as packings and cotter pins are identified in the maintenance tasks. If the step does not say to discard a part, the part should be saved for later use.

(5) IDENTIFICATION. During disassembly, tag leads on electrical parts to ensure proper assembly. Tag each lead as it is removed.

(6) TORQUING. Where needed, torque values are listed in the maintenance task.

The torque values given in the text of this manual are the actual values that must be applied to the nut or screw for proper maintenance.

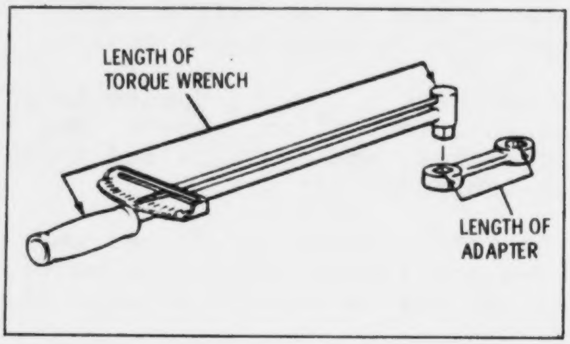
Some tasks require the use of a torque wrench adapter when the nut or screw cannot be reached with a regular socket on the end of the torque wrench. These adapters add to the overall length of the torque wrench and make the dial or scale reading less than the actual torque applied to the nut or screw. To prevent overtorquing and damage to equipment, calculate a corrected dial or scale reading.

1-9. SAFETY, CARE, AND HANDLING (cont) 1-9

To determine the corrected scale or dial reading, use the following formula and refer to the example.

NOTE

The length of the torque wrench is measured from the center of the handle to the center of the drive. The length of the adapter is measured from the center of the drive to the center of the wrench.



To determine the corrected reading for this task, use the following formula.

$$\text{Corrected reading} = \text{Required torque value} \div \frac{\text{Length of torque wrench} + \text{length of adapter}}{\text{Length of torque wrench}}$$

EXAMPLE: Required torque is 270-300 in.-lb.
Length of torque wrench is 22 inches.
Length of adapter is 3 inches

$$\text{Corrected reading} = \text{Required torque value} \div \frac{\text{Length of torque wrench} + \text{length of adapter}}{\text{Length of torque wrench}}$$

$$\text{Corrected reading} = 270 \text{ in.-lb} \div \frac{22 \text{ inches} + 3 \text{ inches}}{22 \text{ inches}}$$

$$\text{Corrected reading} = 270 \text{ in.-lb} \div \frac{25 \text{ inches}}{22 \text{ inches}}$$

$$\text{Corrected reading} = 270 \text{ in.-lb} \div 1.14$$

$$\text{Corrected reading} = 237 \text{ in.-lb}$$

Repeat above steps for other value.

c. CLEANING:

(1) GENERAL. Cleaning is very important. All parts must be cleaned well and kept clean during maintenance. Dirt or foreign matter can cause malfunctions and equipment failure. Cleaning procedures are covered in the task relating to the specific part.

(2) AVOID ABRASIVES. Except where called for in a task, don't use abrasives, files, wire brushes or sharp tools. On some surfaces, finish is important to the operation of close-fitting parts.

(3) REMOVAL AGENTS. Remove gum or old grease deposits by soaking parts in cleaning solvent. Scrub parts with a brush. Use crocus cloth to remove minor surface defects.

(4) CLEANING INSTRUCTIONS. Care is needed in all cleaning procedures. Dirt can damage parts and cause malfunctions. When you perform any cleaning procedure, do the following:

Clean all parts before inspection, after repair, and before assembly.

Keep hands free of grease, grease collects dirt.

After cleaning, cover or wrap parts to protect from dirt.

CAUTION

Cleaning solvent causes leather, rubber and synthetic materials to become brittle. Do not use cleaning solvent to clean seals.

Clean seals with soap and water. Dry parts with a clean wiping rag.

Blow out insert holes with compressed air.

d. INSPECTION: All removed parts must be inspected with care. Replace parts if damage or wear exceeds allowable limits as specified in the maintenance task.

(1) BEARINGS. Inspect bearings for free and smooth rotation, and broken or missing balls or rollers. Also look for tightness of fit in bearing bores. Inspect bearing races for wear and color changes due to heat.

1-9. SAFETY, CARE, AND HANDLING (cont) 1-9

(2) BUSHINGS, AND BUSHING-TYPE BEARINGS. Check all bushings and bushing-type bearings for secure fit in casting. Check for color changes which could mean overheating. Inspect for size, scoring, out-of-roundness, burrs, sharp edges, and signs of seizing.

Check for dirt in oil holes and in bushing-type bearings. Oil holes and grooves must be clean and not damaged.

(3) PREFORMED PACKINGS AND GASKETS. Inspect preformed packings for wear, brittleness, cracks, cuts and damage.

Inspect gaskets and seals for wear, nicks, cuts, and torn or missing gasket material. Replace gasket if needed. Gaskets and seals on electrical parts may be reused.

(4) INSERTS. Inspect inserts for cracks, stripped or damaged threads, and for loose fit.

(5) STUDS. Inspect all studs for stripped or damaged threads, bent or loose condition, and signs of stretching.

(6) GEARS. Inspect gears for burrs, wear, cracked or broken teeth, and pitting at tooth contact areas.

(7) SPLINED PARTS. Inspect splined parts for burrs, wear, twisted, cracked, or broken splines.

(8) THREADED PARTS. Inspect all threaded parts for burrs and stripped or damaged threads.

(9) SPRINGS. Inspect springs for wear, defects, breaks, and loss of tension or compression. Load and height inspection data, where needed, are given in maintenance procedures.

(10) RETAINING RINGS. Inspect retaining rings for nicks, burrs, defects, loss of tension, and wear.

(11) ELECTRICAL PARTS. Inspect electrical parts before you install them. Look for mildew, corroded, or burned parts. Inspect wire insulation for cracks, tears, burns, or missing material.

e. LUBRICATION: Lubrication is very critical for the smooth and reliable operation of parts. It is essential that only the specified lubricant be applied to those surfaces of parts identified under the LUBRICATION heading in the maintenance task.

Avoid applying excessive amounts of lubricant as this will trap dirt and grit which may cause the early failure of a part or component.

Section III. PRINCIPLES OF OPERATION

1-10. MAJOR COMPONENTS - OPERATION 1-10

MAJOR COMPONENTS: The gun consists of three major assemblies: barrel, feeder, and receiver.

(1) BARREL ASSEMBLY:	The barrel gives directional control to the projectile and brakes some of the barrel recoil.
(2) FEEDER ASSEMBLY:	(a) Removes linked ammunition from chutes. (b) Strips rounds from links. (c) Places round into face of bolt. (d) Removes spent cartridge case from face of bolt. (e) Provides a means of selecting any one of two types of available ammunition.
(3) RECEIVER ASSEMBLY:	(a) Rams and fires the rounds, and extracts and ejects spent cartridge cases. (b) Suppresses the recoil force from the barrel and breech.

1-11. BARREL ASSEMBLY - OPERATION 1-11

BARREL ASSEMBLY: The barrel assembly gives directional control to projectile. The barrel assembly consists of the following components.

(1) BARREL:

(a) Receives rounds in the cartridge chamber at breech end of barrel.

(b) Helps contain explosive force when round fires.

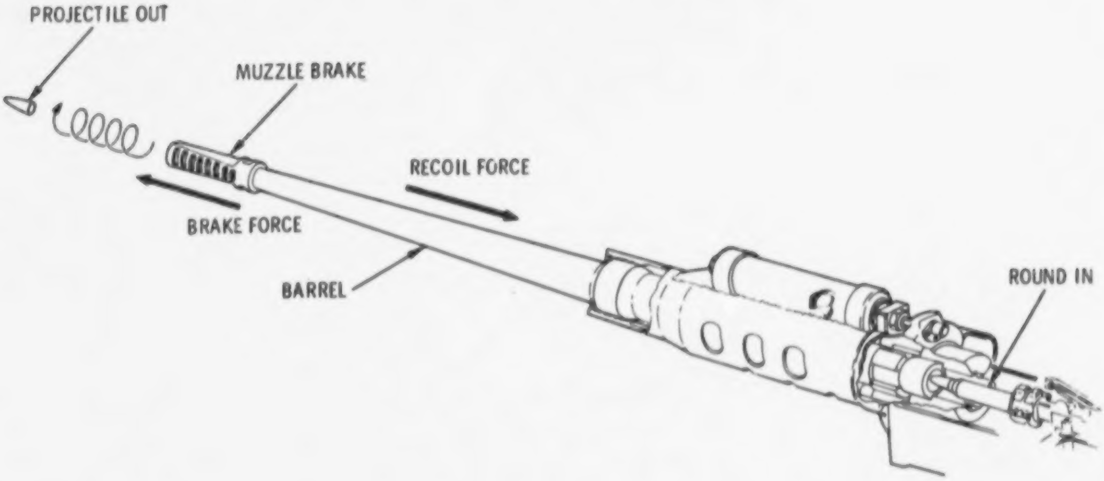
(c) Develops a right-spin rotation to projectile.

(2) MUZZLE BRAKE:

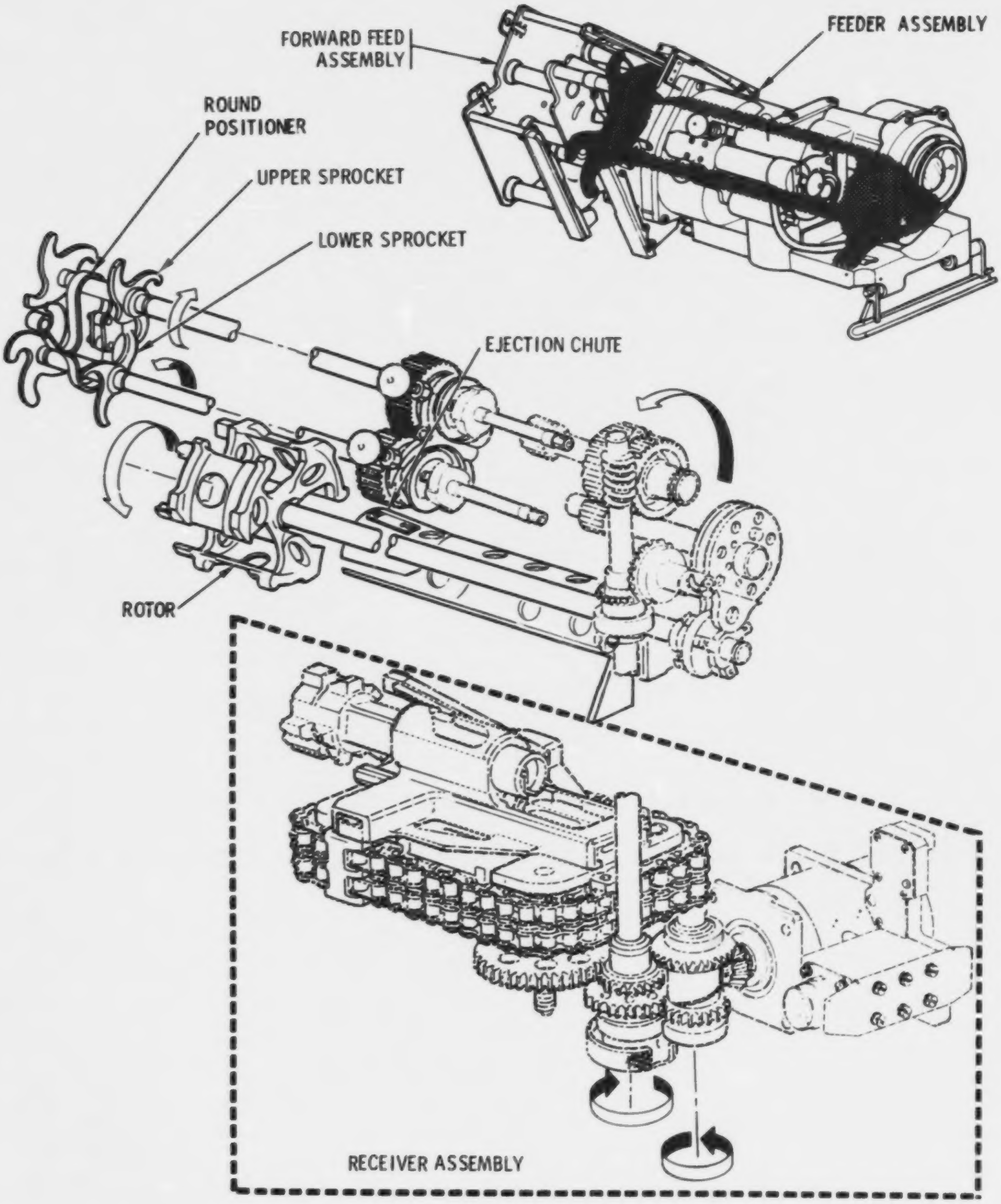
(a) Counters some explosive recoil force.

(b) Disperses muzzle blast.

(c) Reduces blast flash.


PROJECTILE OUT
MUZZLE BRAKE
RECOIL FORCE
BRAKE FORCE
BARREL
ROUND IN

1-12. FEEDER ASSEMBLY - OPERATION 1-12


FORWARD FEED ASSEMBLY
FEEDER ASSEMBLY
ROUND POSITIONER
UPPER SPROCKET
LOWER SPROCKET
EJECTION CHUTE
ROTOR
RECEIVER ASSEMBLY

1-12. FEEDER ASSEMBLY - OPERATION (cont) 1-12

a. FEEDER ASSEMBLY FORWARD FEED SECTION: The forward feed section pulls linked rounds into the gun; separates the rounds and links; places rounds in the bolt face; removes spent round cases from the bolt face; and aids in ejecting spent cases from the gun. The forward feed section consists of the following components:

(1) FORWARD FEED ASSEMBLY:

(a) Supports upper and lower sprocket assemblies.

(b) Support rotor.

(c) Provides mounting for the forward feed gate, lower round guide, and the two forward link strippers.

(d) Provides a mounting bracket for the forward end of the feed chutes.

(e) Supports the forward end of the ejection chute.

(2) UPPER SPROCKET: The upper sprocket strips AP rounds from links and places them in the rotor.

(3) LOWER SPROCKET: The lower sprocket strips HE rounds from links and places them in the rotor.

(4) ROUND POSITIONER: The round positioner guides and positions the rounds during transfer from sprocket to rotor.

(5) ROTOR:

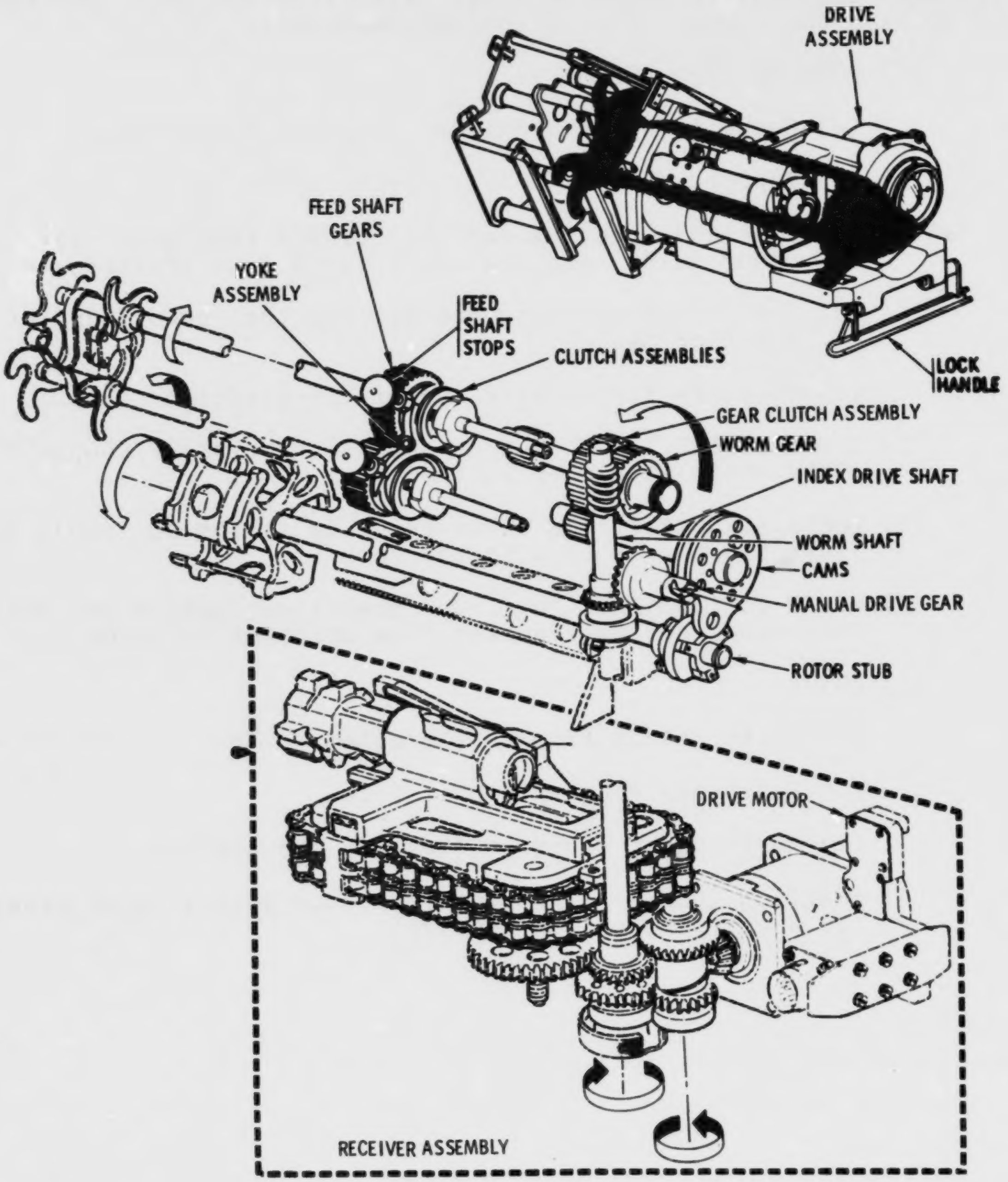
(a) Takes rounds from the sprockets.

(b) Positions rounds in bolt face.

(c) Moves spent cases in front of the ejector.

(6) EJECTION CHUTES: The ejection chute guides spent cases to the eject port on the receiver.

1-12. FEEDER ASSEMBLY - OPERATION (cont) 1-12


DRIVE ASSEMBLY
FEED SHAFT GEARS
YOKE ASSEMBLY
FEED SHAFT STOPS
CLUTCH ASSEMBLIES
LOCK HANDLE
GEAR CLUTCH ASSEMBLY
WORM GEAR
INDEX DRIVE SHAFT
WORM SHAFT
CAMS
MANUAL DRIVE GEAR
ROTOR STUB
DRIVE MOTOR
RECEIVER ASSEMBLY

1-12. FEEDER ASSEMBLY - OPERATION (cont) 1-12

b. DRIVE ASSEMBLY: Mounts and drives the forward feeder section components and controls feed selection. Provides a means to manually operate the gun during a power failure, and sends electrical signals to the turret controls indicating the position of the bolt. The drive assembly contains the following components:

(1) WORMSHAFT ASSEMBLY: Driven by the receiver drive shaft. The wormshaft assembly turns the wormgear and also provides a means to manually operate the gun with the manual drive gear.

(2) WORMGEAR: Drives the gear clutch assembly.

(3) GEAR CLUTCH ASSEMBLY: The clutch gear shaft, of the gear clutch assembly, drives the upper feed shaft spur gear and the index drive shaft with the clutch spur gear. The gear clutch assembly also provides for timing the index drive section with the feed shaft section. The clutch will slip if the feeder jams.

(4) UPPER FEED SHAFT GEAR: Drives the lower feed shaft gear and the upper clutch assembly (when engaged by the feed select solenoid).

(5) LOWER FEED SHAFT GEAR: Drives the lower clutch assembly (when engaged by the feed select solenoid).

NOTE

The lower feed shaft and clutch assembly operates the same as the upper feed shaft and clutch assembly.

(6) UPPER CLUTCH ASSEMBLY: Drives the feed shaft (when engaged) which in turns drives the upper feed sprocket.

(7) UPPER FEED SHAFT: Drives the upper feed sprocket (when engaged) which in turn strips rounds from links. Contains lugs that mate with the feed shaft stops.

(8) YOKE ASSEMBLY: Rotated by the feed select solenoid. The yoke assembly engages or disengages the clutch assemblies when the feed selection is changed by the feed select solenoid either manually or electrically.

1-12 FEEDER ASSEMBLY - OPERATION (cont) 1-12

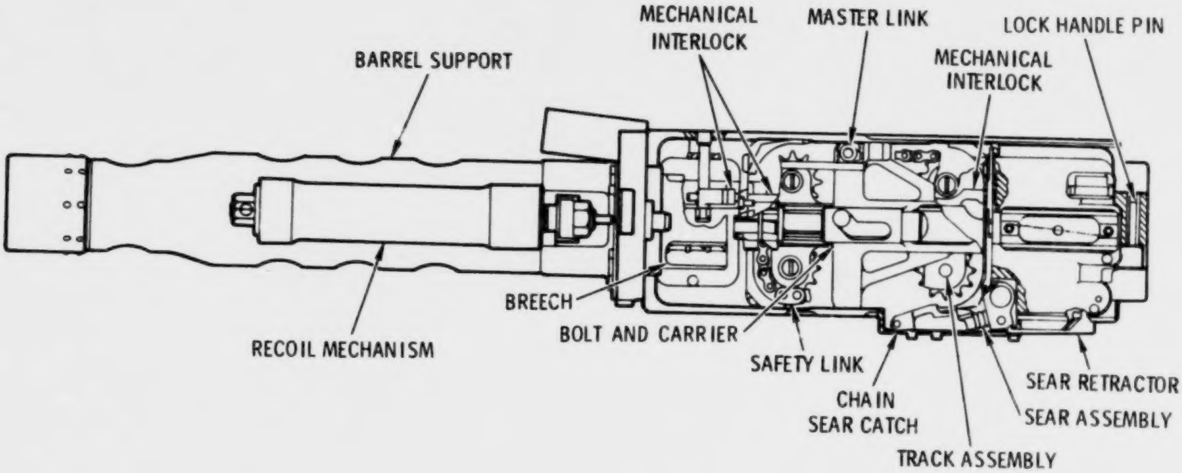
(9) INDEX DRIVE SHAFT: Driven by the gear clutch assembly. The index drive shaft is timed with the gear clutch assembly and rotates the rotor stub, which provides the sprockets with proper ratio to the rotor. The index drive shaft also rotates the control cam to give the position of the bolt.

(10) ROTOR STUB: Drives the rotor and provides the proper ratio between the sprocket and rotor.

(11) LOCK HANDLE: Locks the feeder to the receiver and provides a quick disconnect between the feeder and receiver electrical connectors when the handle is in the unlocked position.

(12) FEED SELECT SOLENOID: Provides manual or electrical selection of ammunition type (AP or HE).

1-13. RECEIVER ASSEMBLY - OPERATION


MECHANICAL INTERLOCK
MASTER LINK
LOCK HANDLE PIN
BARREL SUPPORT
MECHANICAL INTERLOCK
BREECH
BOLT AND CARRIER
RECOIL MECHANISM
SAFETY LINK
CHAIN SEAR CATCH
TRACK ASSEMBLY
SEAR RETRACTOR
SEAR ASSEMBLY

1-13. RECEIVER ASSEMBLY - OPERATION (cont) 1-13

a. RECEIVER ASSEMBLY: Rams and fires rounds. Extracts and ejects spent cases or unfired rounds. Contains a mechanical interlock system that stops the gun if a round misfires or hangfires. The receiver assembly consists of receiver gears, track assembly, bolt and carrier assembly, receiver housing, and includes the following subassemblies:

(1) BARREL SUPPORT: Holds breech in receiver and supports barrel.

(2) RECOIL MECHANISM: Absorbs most of recoil force when round fires.

(3) BREECH: Fits into front end of receiver and around barrel. Breech and bolt lugs lock to contain explosive force when round fires.

(4) SEAR ASSEMBLY: Controlled by sear solenoid and mechanical interlock. Locks chain assembly in event of misfire, by engaging the safety link, and in the sear position, by engaging the master link.

(5) CHAIN SEAR CATCH: Keeps chain from rotating backward during firing recoil.

(6) SEAR RETRACTOR: Provides a means to manually disengage the sear assembly during manual emergency operation.

(7) MECHANICAL INTERLOCK: Engages sear to stop bolt from being unlocked from breech if there is no recoil (round misfires or hangfires).

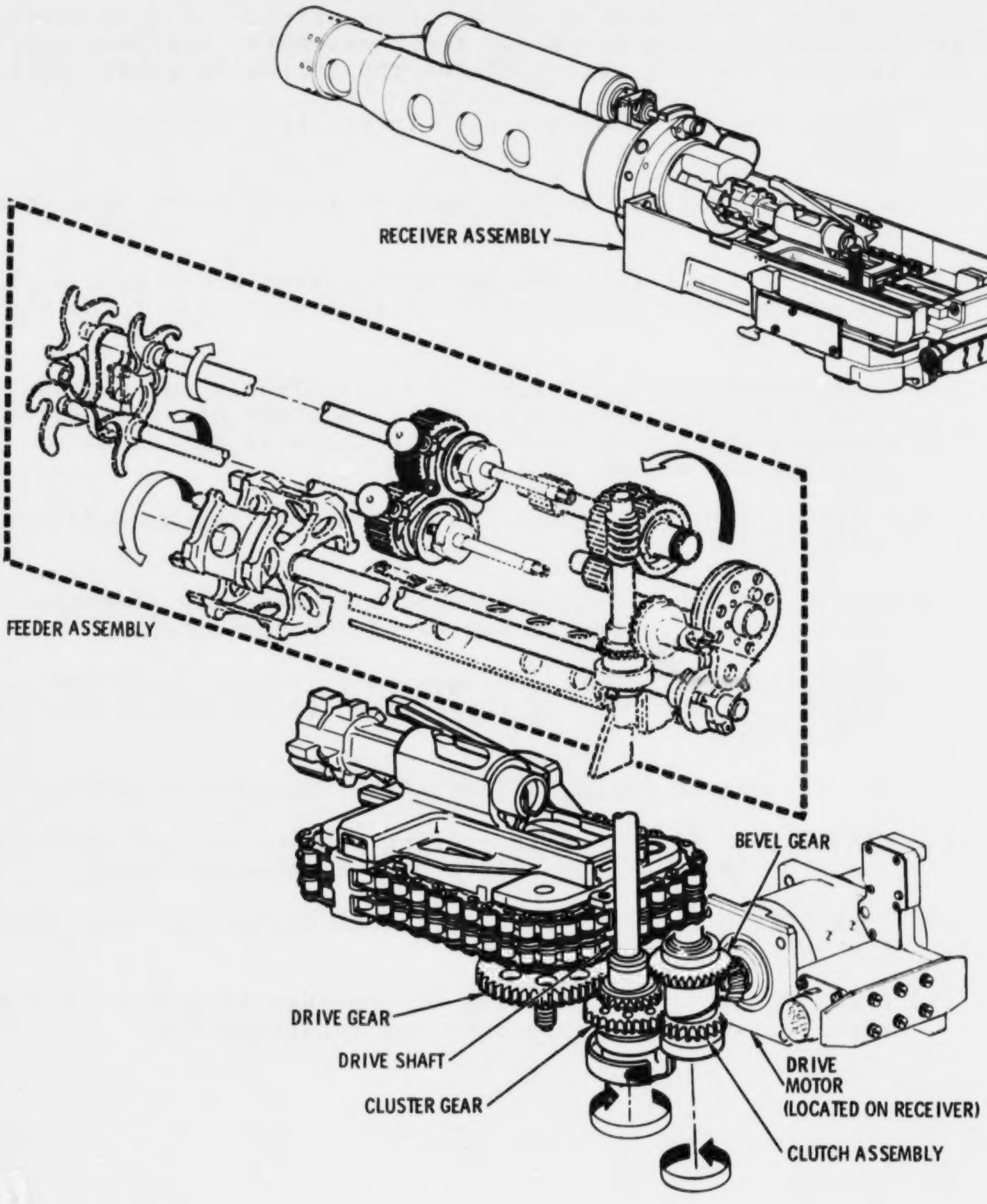
(8) MOTOR: Drives gears and mechanism required to operate gun.

(9) HANDLE LOCK PIN: Applies spring tension to lock handle on one side and provides a lock on the opposite side.

(10) SEAR SOLENOID: Provides electrical control of sear through the sear push rod.

(11) RECEIVER HOUSING: Contains or provides attachment for all receiver assembly components and subassemblies.

1-13. RECEIVER ASSEMBLY - OPERATION (cont) 1-13


RECEIVER ASSEMBLY
FEEDER ASSEMBLY
BEVEL GEAR
DRIVE GEAR
DRIVE SHAFT
CLUSTER GEAR
DRIVE MOTOR (LOCATED ON RECEIVER)
CLUTCH ASSEMBLY

1-13. RECEIVER ASSEMBLY - OPERATION (cont) 1-13

b. RECEIVER GEARS: Driven by motor. Receiver gears work as follows:

(1) BEVEL GEARS: The small bevel gear, mounted on the motor shaft, drives the large bevel gear, which in turn, drives the clutch assembly.

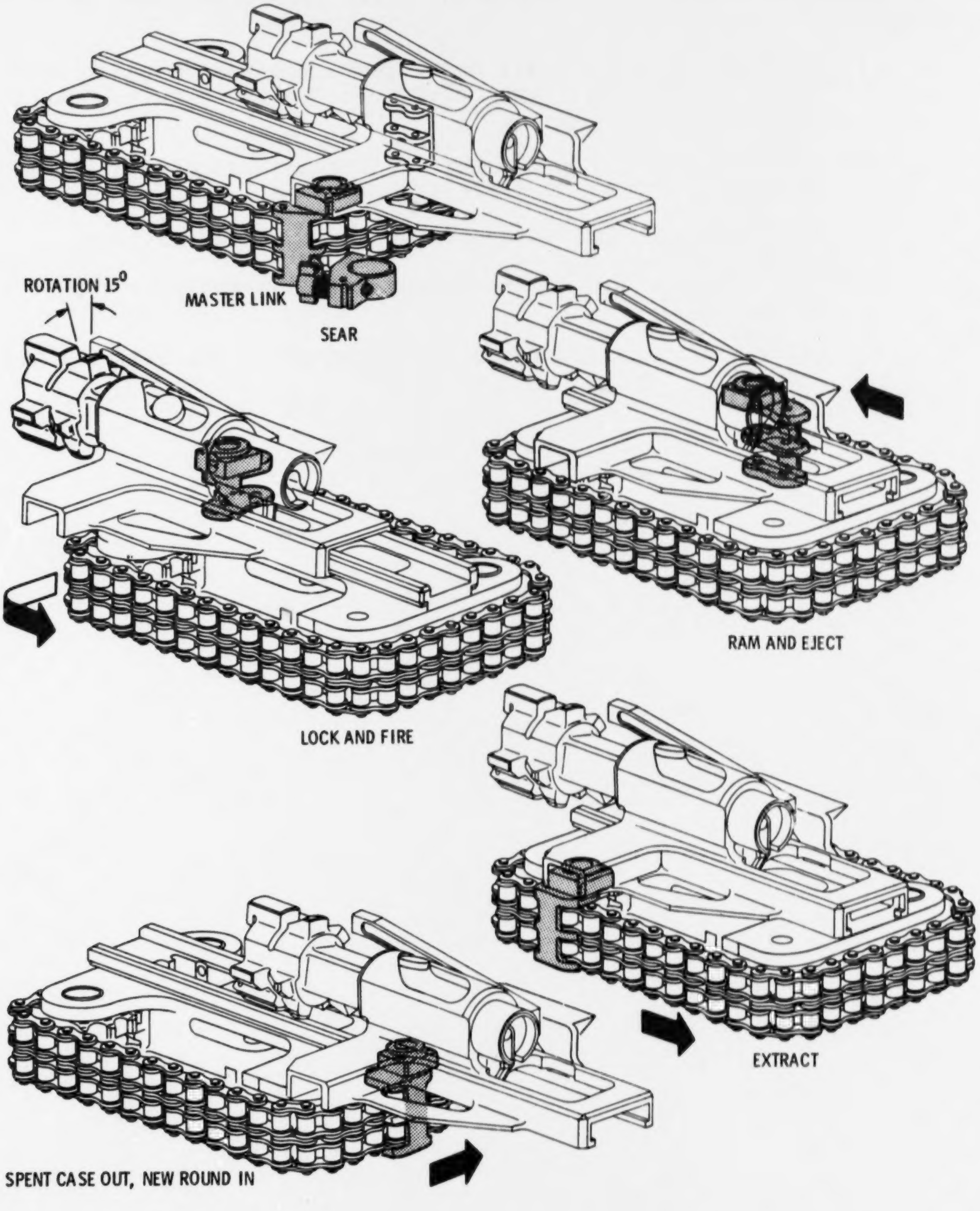
(2) CLUTCH: Drives cluster gear. If gun jams, clutch slips to prevent damage to drive train.

(3) CLUSTER GEAR: Drives the drive shaft and drive gear.

(4) DRIVE SHAFT: Drives the feeder drive assembly at top of drive shaft.

(5) DRIVE GEAR: Drives the drive sprocket in the bolt and track assembly.

1-13. RECEIVER ASSEMBLY - OPERATION (cont) 1-13


ROTATION 15°
MASTER LINK
SEAR

RAM AND EJECT

LOCK AND FIRE

EXTRACT

SPENT CASE OUT, NEW ROUND IN

1-13. RECEIVER ASSEMBLY - OPERATION (cont) 1-13

c. TRACK ASSEMBLY: Driven by the track drive sprocket. The track assembly accomplishes the following during each complete cycle:

(1) Sear assembly engages master link and positions the chain before firing.

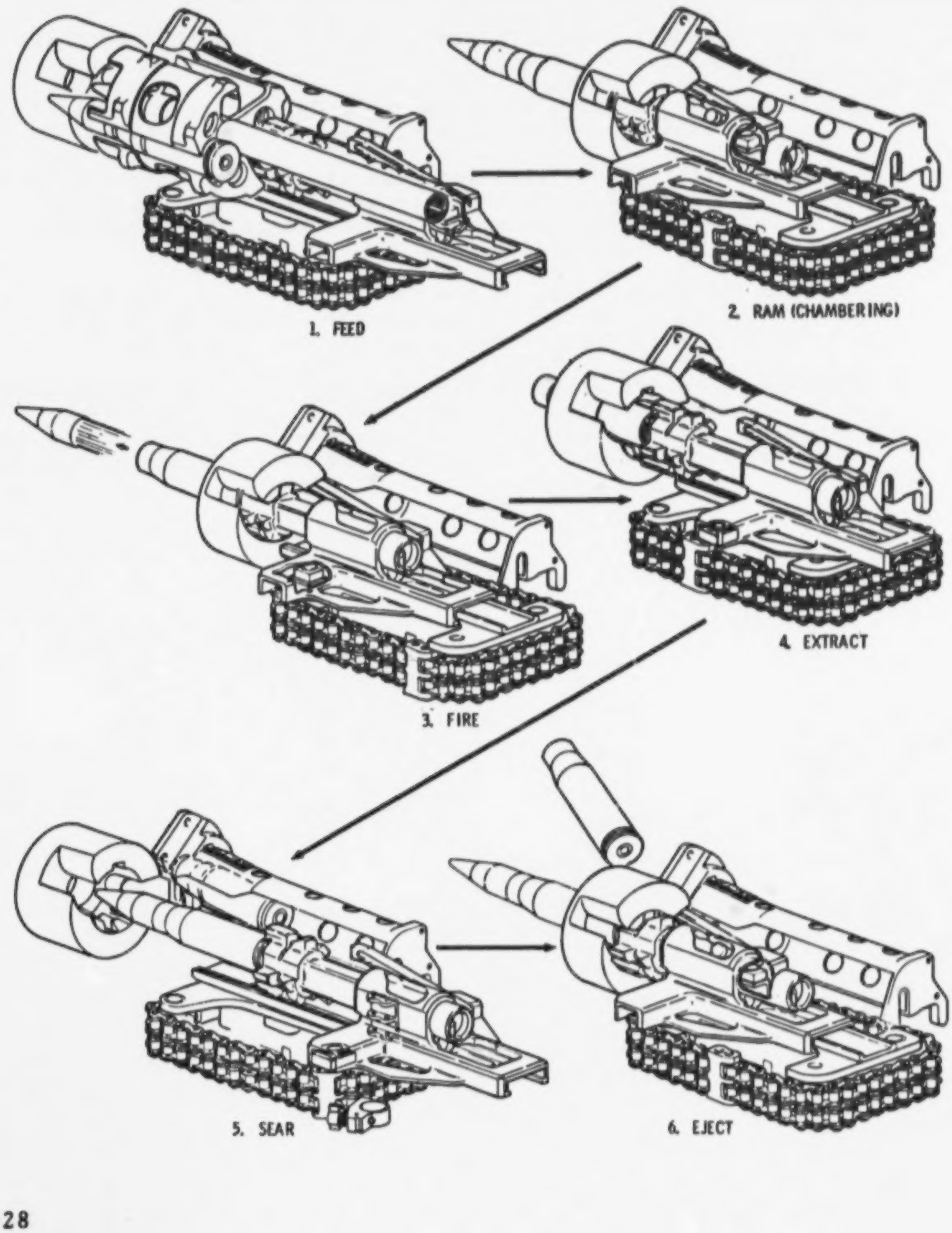
(2) After sear release, drive sprocket drives the chain including master link and master link slider.

(3) Master link slider fits into the slider path in the bolt and carrier assembly. As chain rotates (counterclockwise) around sprockets, the slider moves the bolt and carrier forward and backward.

(4) When bolt carrier is in the forward position, the slider moves from right to left across the carrier slider path (firing dwell time to allow hot gases to escape).

(5) When bolt carrier is in the rear position, the slider moves from left to right across the carrier slider path (feed dwell time to allow a new round to be positioned in the bolt face, and the spent case positioned in front of the ejector).

1-13. RECEIVER ASSEMBLY - OPERATION (cont) 1-13



1. FEED

2. RAM (CHAMBERING)

3. FIRE

4. EXTRACT

5. SEAR

6. EJECT

1-13. RECEIVER ASSEMBLY - OPERATION (cont) 1-13

d. BOLT AND CARRIER: Driven by track assembly. The bolt and carrier accomplishes the following operations during each complete cycle:

(1) When the bolt carrier is in the rear position, the rotor positions a new round in the bolt face.

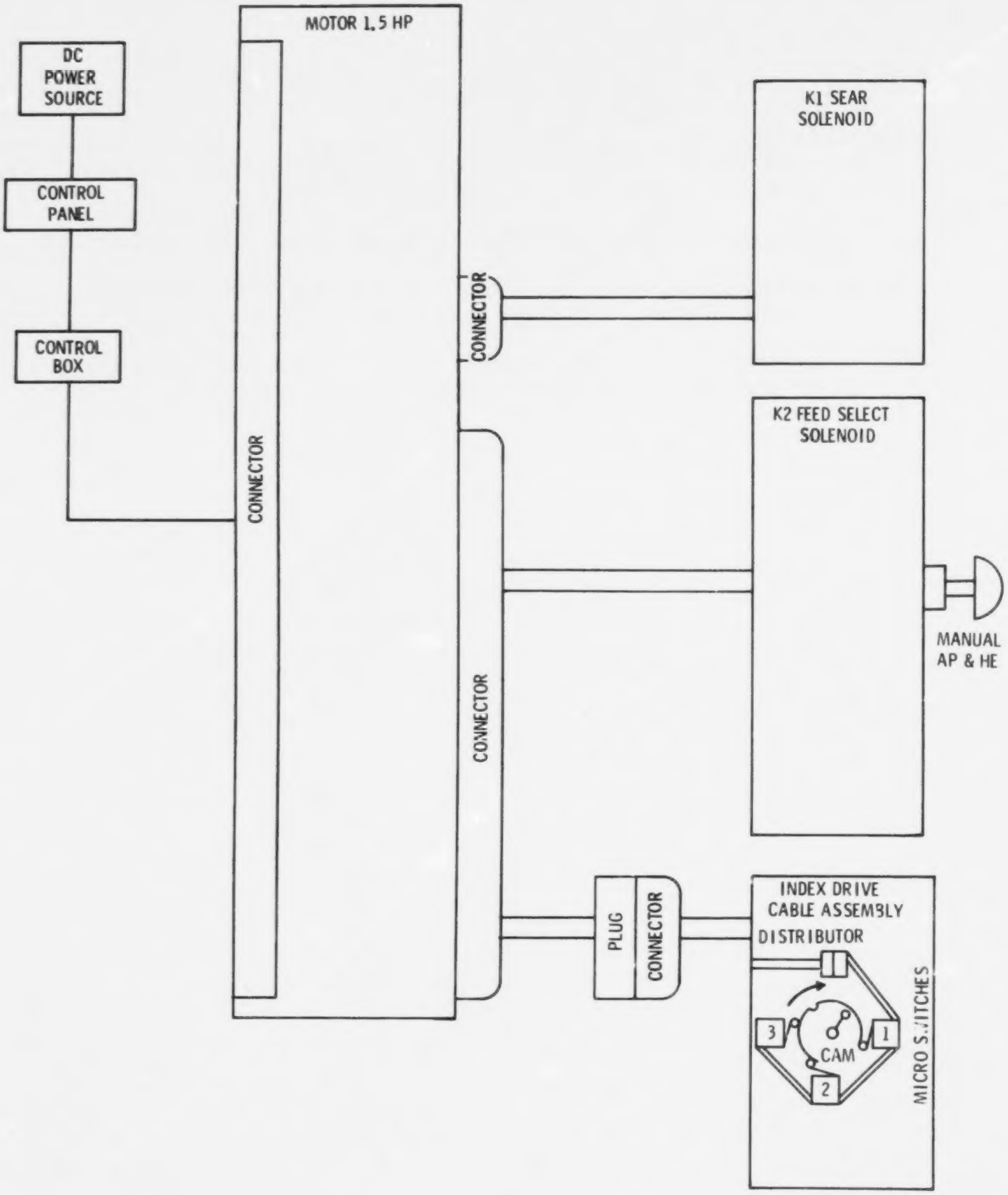
(2) Rotation of the chain assembly (counterclockwise) moves the bolt carrier forward. In the forward position, locking lugs on the bolt lock into the breech locking lugs.

(3) Firing pin is cocked, then released, and the round fires.

(4) Bolt and carrier starts to move to the rear unlocking the bolt and breech lugs and extracts the spent case.

(5) In sear position, the rotor sweeps the spent case from the bolt and positions a new round in the bolt face.

1-14. ELECTRICAL SYSTEM - OPERATION 1-14


MOTOR 1.5 HP
DC POWER SOURCE
CONTROL PANEL
CONTROL BOX
CONNECTOR
CONNECTOR
K1 SEAR SOLENOID
CONNECTOR
K2 FEED SELECT SOLENOID
MANUAL AP & HE
PLUG
CONNECTOR
INDEX DRIVE CABLE ASSEMBLY
DISTRIBUTOR
3
1
CAM
2
MICRO SWITCHES

1-14. ELECTRICAL SYSTEM - OPERATION (cont) 1-14

ELECTRICAL SYSTEM: The electrical system consists of the motor, sear solenoid, feed select solenoid, and cable assembly. Component functions are:

(1) MOTOR: Operates on voltages between 18 and 30 VDC and drives the receiver and feeder gears. Contains junction and connectors for interface between receiver and feeder assemblies.

(2) SEAR SOLENOID: Controls sear by moving sear push rod.

(3) FEED SELECT SOLENOID: Provides manual and electrical selection of AP or HE ammunition. Sends an electrical signal to the control panel to indicate ammunition selection. Contains connector for interface between feeder and receiver.

(4) INDEX DRIVE CABLE ASSEMBLY: Provides sensing of the bolt position through a series of three microswitches. Sends electrical signals through the feed select solenoid cable to the control box and control panel to provide the necessary control and indication functions (normal shutdown, seared, or breech locked).

CHAPTER 2

MAINTENANCE INSTRUCTIONS

OVERVIEW

This chapter contains maintenance instructions. It includes information on repair parts, special tools and support equipment, preventive maintenance, and troubleshooting. Maintenance information is found in the following sections:

Section I - Repair Parts, Special Tools, TMDE, and Support Equipment

Section II - Service Upon Receipt

Section III - Preventive Maintenance

Section IV - Troubleshooting

Section V - Maintenance Procedures

Section VI - Preparation for Storage or Shipment

Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

2-1. COMMON TOOLS AND EQUIPMENT 2-1

For authorized equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

2-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT 2-2

a. Special tools are listed in Appendix C of this manual.

b. There are no Test Measurement and Diagnostic Equipment (TMDE) and support equipment authorized at the organizational maintenance level.

2-3. REPAIR PARTS 2-3

Repair parts are listed and illustrated in Appendix C of this manual.

Section II. SERVICE UPON RECEIPT

2-4. GENERAL 2-4

Upon receipt of materiel, check the containers for damage before opening or unpacking the contents. Be sure to position and open the containers with nailed container tops up.

2-5. SERVICE UPON RECEIPT OF MATERIEL 2-5

Use the following instructions for servicing the gun after initial receipt.

LOCATION	ITEM	ACTION	REMARKS
		WARNING During inspection of receiver, be sure barrel chamber, breech, bolt, and feeder are clear of ammunition.	
Container	Gun	Remove gun and all other items from container. **NOTE** Items must agree with Basic Issue Items List.	
Gun	Barrel	Remove volatile corrosion inhibitor (VCI) core from barrel bore. Clean bore and external surfaces with clean, dry, cleaning swabs (Item 7, App D).	
Gun	Feeder	Remove volatile corrosion inhibitor (VCI) strips from feeder standoffs and sprockets. Wipe external surfaces with wiping rags (Item 4, App D). Inspect for missing or damaged parts.	

2-5. SERVICE UPON RECEIPT OF MATERIEL (cont) 2-5

LOCATION	ITEM	ACTION	REMARKS
Gun	Receiver	Remove volatile corrosion inhibitor (VCI) core from barrel support bore. Wipe external surfaces with wiping rags (Item 4, App D). Inspect for missing or damaged parts. Provide a suitable cover for exposed bolt and track assembly parts until gun is assembled.	
Gun	Barrel Feeder Receiver	Assemble gun if it is to be stored. Install gun in mount if it is to be placed in operation.	

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-6. SEMI-ANNUAL INSPECTION 2-6

To ensure maximum operational readiness, it is necessary that the gun be inspected at regular intervals so that any defects can be discovered and corrected before serious damage or failure occurs. Any maintenance problems discovered that are beyond your authorization will be referred to Direct Support Maintenance for correction.

WARNING

> Failure to replace the breech assembly and the firing pin at the specified intervals may result in explosion or unexpected firing of the gun. Serious injury to personnel and damage to equipment may result.

Due to the critical nature of the breech assembly and firing pin for the safe and reliable operation of the gun, these components, without exception, will be replaced at the following intervals:

1. BREECH ASSEMBLY .... Replace at 25,000 rounds (para 2-48).
2. FIRING PIN .... Replace at 8000 rounds (para 2-60).

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: BARREL ASSEMBLY REMOVED	PARA 2-24	
Barrel Assy (P/N 12524001)	1. Cracks anywhere on external/ internal surfaces of barrel and muzzle brake.	Visual	Replace barrel if cracked (para 2-24). Replace muzzle brake if cracked (para 2-25).
	2. Deleted.		
	3. Bore erosion.	Visual	Replace barrel if the lands are even with the grooves (para 2-24).
	4. Corrosion and contaminates.	Visual	
	a) Internal surface.	Visual	Remove with chamber and bore brush.
	b) External surface.	Visual	Remove with wire brush.
	5. Broken or missing muzzle brake cotter pin.	Visual	Replace if broken or missing (para 2-25).
	6. Burrs on breech lugs and front barrel guide surface.	Visual	Smooth and level surface with a fine cut file or emery cloth.
	7. Proper lube and corrosion protection prior to installation.	Visual	Use VVL-800 to lube external and internal surface of barrel.

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
Barrel Assembly (P/N 12524001) (cont)	8. Pitts and corrosion on internal surface of barrel that exceed the depth of the lands and grooves.	Visual	Replace barrel (para 2-24).
	NOTE: BARREL ASSEMBLY REMOVED	PARA 2-24	
Barrel Support Assembly (P/N 12524350)	1. Cracks anywhere on assembly.	Visual	If cracked, replace (para 2-46).
	2. Corrosion on front bearing.	Visual	Remove by wire brush, if pitted, replace assy.
	3. Corrosion on aluminum barrel support.	Visual	Same as above.
	4. For lube on internal surface and grooves and corrosion protection on external surface of steel front bearing prior to installation of barrel assembly.	Visual	Apply MIL-G-21164 (GMD) to internal surface and VVL-800 to external surface of front bearing as required.
	5. Loose rivets on barrel support bearing.	Visual	If more than six rivets are loose together in one area, replace barrel support (para 2-46).
	6. Cracked welds around recoil mechanism housing.	Visual	If welds are cracked, replace barrel support (para 2-46).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: BARREL ASSEMBLY REMOVED	PARA 2-48	
Breech Assembly (P/N 12524370)	1. Cracks in bolt locking and barrel locking lug areas.	Visual	If cracks are found, replace breech (para 2-48).
	2. Galling marks on bolt locking lug surfaces.	Visual	Replace assembly if galled (para 2-48).
	3. Corrosion on internal/exterior surfaces.	Visual	Wire brush.
	4. Burrs on bolt locking and barrel locking lug edges.	Visual	Remove with fine stone or emery cloth.
	5. Lube on external surface of assembly prior to installation on receiver.	Visual	Apply a thin coat of MIL-G-21164 (GMD) lube to the external surface.
	6. Deep pitts on locking lugs or external surface.	Visual	Replace breech (para 2-48).
	NOTE: BOLT AND CARRIER ASSEMBLY DISASSEMBLED	PARA 2-60	
Bolt and Carrier Assembly (P/N 12524320)	1. Cracks anywhere on assembly.	Visual	Replace if cracked (para 2-60).
	2. Corrosion on internal/external surfaces.	Visual	Remove with wire brush.
	3. Galling on reset CAM surface.	Visual	Replace if galled (para 2-60).
	4. Lube on carrier assembly prior to installation on bolt/track assembly.	Visual	Apply a thin coat of MIL-G-21164 (GMD) to functional surfaces.

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: FIRING PIN REMOVED	PARA 2-60	
Firing Pin Assembly (P/N 12524325)	1. Bent, broken, or deformed spring.	Visual	Replace firing pin assembly (para 2-60).
	2. Bent or broken spring retainer.	Visual	Replace firing pin assembly (para 2-60).
	3. Burnt or broken tip.	Visual	Replace firing pin assembly (para 2-60).
	4. Broken or burred tang.	Visual	Replace firing pin assembly (para 2-60).
	NOTE: CAM PIN ASSEMBLY REMOVED	PARA 2-60	
CAM Pin Assembly (P/N 12524335)	1. Broken or chipped guide pin.	Visual	Replace assembly if pin is chipped or broken (para 2-60).
	2. Excessive wear on CAM pin surface.	Visual	Replace assembly if worn (para 2-60).
	3. Lube on CAM pin assembly before installation in bolt carrier assembly.	Visual	Apply MIL-G-21164 (GMD) to CAM pin functional surface before installation.

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: FIRING PIN SLEEVE REMOVED	PARA 2-60	
Firing Pin Sleeve (P/N 12524330)	1. Bent or cracked sleeve and/or deformed keeper recess.	Visual	Replace if conditions are found (para 2-60).
	2. Lube on all surfaces prior to installation in bolt assembly.	Visual	Apply light coat of MIL-G-21164 (GMD) to all surfaces.
	NOTE: BOLT ASSEMBLY REMOVED	PARA 2-60	
Bolt Assembly (P/N 12524331)	1. Cracks in locking lugs and upper/lower extractor areas.	Visual	Replace if cracked (para 2-60).
	2. Galling marks on locking lug surfaces.	Visual	Replace if galled (para 2-60).
	3. Corrosion on surfaces.	Visual	Remove with wire brush.
	4. Burrs on locking lug edges.	Visual	Remove with fine stone or emery cloth.
	5. Enlarged jagged firing pin hole in bolt insert.	Visual	If firing pin hole is jagged and enlarged, replace bolt assembly (para 2-60).
	6. Lube on bolt assembly prior to assembly in bolt carrier.	Visual	Apply a thin coat of MIL-G-21164 (GMD) onto functional surfaces.

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: TRACK ASSEMBLY DISASSEMBLED	PARA 2-61	
Track Assembly (P/N 12524380)	1.a. Missing teeth, cracks on idler sprocket-3 (P/N 12524394).	Visual	Replace if missing teeth, cracked, or damaged (para 2-61).
	b. Missing, broken, or cracked spring pins in idler sprocket shaft assembly.	Visual	Replace sprocket shaft (para 2-61).
	c. Loose fitting or damaged drive sprocket retainer.	Visual and Feel	Replace retainer if loose fitting or damaged (para 2-61).
	d. Missing teeth, cracks, damaged internal splines on drive sprocket.	Visual	Replace drive sprocket if missing teeth, cracked, or damaged internal splines (para 2-61).
	e. Damaged spring pin and roller of clevis assembly.	Visual	Replace damaged components of clevis assembly (para 2-61).
	f. Flattened or cracked spring washers of clevis assembly.	Visual	Replace all four spring washers (para 2-61).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
Track Assembly (P/N 12524380) (cont)	g. Sheared or damaged spring pin, damaged safety handle and pawl pin and misshapen helical pawl pin spring, chipped or worn camming surface of safety actuator; chipped or worn camming surface and firing pin sliding surface of safety pawl; misshapen safety pawl helical spring; damaged firing pin/safety pawl spring pin.	Visual	Replace components that are cracked, damaged, misshapen, chipped or worn (para 2-61).
	h. Chipped or worn firing pin sliding surface of firing pin pawl, misshapen firing pin pawl helical spring.	Visual	Replace components that are chipped, worn, or misshapen (para 2-61).
	i. Cracks, galled, and/or burred bolt carrier assembly slide rails on track.	Visual	Replace track if cracked, or rails are burred (para 2-61).
	j. Installation of new packings in grooves of idler sprocket shaft holes in track.	Visual	Install packings (para 2-61).
	2. Lube on all functional surfaces of components installed on track assembly prior to installation of bolt track assembly into receiver.	Visual	Apply thin coat of MIL-G-21164 (GMD) to all functional surfaces.

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: CHAIN ASSEMBLY REMOVED	PARA 2-61	
Chain Assembly (P/N 125244405)	1. Cracked master link, safety link, chain link straps, pins, and rollers.	Visual	Replace chain assembly if any item is cracked (para 2-61).
	2. Rounded or sheared off edges of sear assembly contact surfaces on master and safety link assemblies.	Visual	If edges are rounded or sheared off, replace chain assembly (para 2-61).
	3. Cracked or chipped slider on master link.	Visual	Replace chain assembly if slider is cracked or chipped (para 2-61).
	4. Lube on chain assembly.	Visual	Apply MIL-G21164 (GMD) to chain assembly component surfaces and lube hole of slider (para 2-61).
	NOTE: SEAR ASSEMBLY REMOVED	PARA 2-63	
Sear Assembly (P/N 12524445)	1. Rounded or sheared off edge of master/safety link contact of sear arm.	Visual	If edge of sear arm is rounded or sheared off, replace sear assembly (para 2-63).
	2. Cracked sear arm.	Visual	Replace arm if cracked (para 2-63).
	3. Flattened or cracked spring washers.	Visual	Replace entire spring washer set if one unit is flattened or cracked (para 2-63).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
Sear Assembly (P/N 12524445)	4. Sear rocker for burrs, galls, and wear.	Visual	Remove small burrs with a fine file or emery cloth. Replace if worn.
	5. Loose fitting pin.	Visual and Feel	Replace pin and sear rocker if pin fits loosely (para 2-63).
	6. Cracked, damaged spring pin.	Visual	Replace spring pin if cracked or damaged (para 2-63).
	7. Lube on functional surfaces prior to assembly on receiver.	Visual	Apply MIL-G-21164 (GMD) lube on functional surfaces.
	NOTE: MECHANICAL INTERLOCK REMOVED	PARA 2-56	
Mechanical Interlock System Components	1. Worn or distorted sear rocker spring pin slot in sear push rod.	Visual	Replace sear push rod if distorted or noticeable wear in slot or pins (para 2-56).
	2. Elongated holes or worn (1/8 inch flat spot) surface on reset cam finger of push rod extension.	Visual	Replace push rod extension if holes or finger is elongated or worn (para 2-56).
	3. Distorted push rod extension helical spring.	Visual	Replace spring if distorted (para 2-56).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
Mechanical Interlock System Components (cont)	4. Broken or distorted pins on interlock crank.	Visual	Replace crank if pins are broken or distorted (para 2-56).
	5. Elongated crank hole in rear chain guide.	Visual	Replace chain guide if crank hole is elongated (para 2-56).
	6. Cracks, excessively worn push rod extension or rocker assembly contact surfaces of actuator rod assembly.	Visual	Replace actuator rod assembly if cracked or worn (para 2-56).
	7. Elongated spring pin hole in rocker spring housing.	Visual	Replace housing if hole is elongated (para 2-56).
	8. Distorted or broken rocker helical spring.	Visual	Replace spring if distorted or broken (para 2-56).
	9. Cracked, missing or deformed rocker spring pin.	Visual	Replace spring pin if missing or damaged (para 2-56).
	10. Cracked rocker or galled breech assembly contact surfaces.	Visual	Replace rocker if cracked, or breech assembly contact surface if galled (para 2-56).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
Mechanical Interlock System Components (cont)	11. Lube on all functional surfaces of sear/safety interlock components.	Visual	Apply thin coat of MIL-G-21164 (GMD) to all functional surfaces.
	NOTE: 1.5 HP DC MOTOR ASSEMBLY REMOVED	PARA 2-64	
1.5 HP DC Motor Assembly (P/N 12524473)	1. Burned, broken, bent connector pins, or burned connector pin receptacles.	Visual	Replace drive motor assembly and forward to Direct Support Maintenance for connector replacement (para 2-64).
	2. Damaged connector shells.	Visual	Replace drive motor assembly and forward to Direct Support Maintenance for connector replacement (para 2-64).
	3. Broken, missing, or loose cover and connector mounting screws. Broken or missing safety wire (rear cover only).	Visual	Replace screws where required and tighten screws where necessary and replace safety wire as required (para 2-64).
	4. Punctured end cover.	Visual	Replace motor assembly if brush cover is punctured (para 2-64).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
1.5 HP DC Motor Assembly (P/N 12524473) (cont)	5. Motor shaft spins more than one revolution when spun by hand.	Visual	Replace motor assembly if motor spins more than one revolution when spun by hand and forward to Direct Support Maintenance for repair (para 2-64).
	NOTE: SEAR SOLENOID ASSEMBLY REMOVED	PARA 2-47	
Sear Solenoid Assembly (P/N 12524449)	1. Broken connector shell.	Visual	Replace sear solenoid assembly if connector shell is broken (para 2-47).
	2. Burned connector pin receptacles.	Visual	If connector pin receptacles are burned, replace sear solenoid assembly (para 2-47).
	3. Pinched or broken armored cable.	Visual	Replace sear solenoid assembly if armored cable is pinched or broken (para 2-47).
	4. Corrosion on solenoid plunger or inside solenoid cavity surfaces.	Visual	Remove with crocus cloth, if minor; replace assembly, if major (para 2-47).
	5. Continuity check between pins A and C (para 2-47).	Multimeter	Replace sear solenoid if no continuity is present (para 2-47).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: RECOIL MECHANISM REMOVED	PARA 2-62	
Recoil Mechanism (P/N 12524420)	1. Galled or cracked outer set of ring springs, or ring springs are unevenly spaced.	Visual	If ring springs are unevenly spaced or cracked, replace entire set of outer ring springs. Replace inner ring set if any ring springs are galled or cracked (para 2-62).
	2. Wet (leaking damper fluid) external surface anywhere on recoil mechanism.	Visual	Replace damper assembly and forward to Direct Support Maintenance for repair (para 2-62).
	3. Low (to first hole) damper reservoir piston rod indication.	Visual	Refill damper assembly with DC 510 fluid (para 2-62).
	4. Bent or distorted straight pin.	Visual	Replace pin if damaged (para 2-62).
	5. Broken or missing retaining nut and safety wire.	Visual	Replace safety wire after checking for retaining nut tightness using recoil spring compression tool (para 2-62).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
Recoil Mechanism (P/N 12524420) (cont)	6. Lube on outer spring set surfaces.	Visual	Apply heavy coat of MIL-G-21164 (GMD) to outer spring set surfaces.
	NOTE: BARREL SUPPORT REMOVED MOTOR GEARBOX COVER REMOVED	PARA 2-46 PARA 2-66	
Receiver Assembly (P/N 12524300)	1. Cracks, galling, or wear on front receiver front housing.	Visual	Replace gun (para 2-22).
	2. Any loose rivet on receiver front housing.	Visual	Replace gun (para 2-22).
	3. Cracked or distorted receiver front housing.	Visual	Replace gun (para 2-22).
	4. Damaged oil seal.	Visual	Replace seal if damaged (para 2-66).
	5. Worn or missing gear teeth, cracks on drive gear assembly, cluster gear, motor bevel gear, and clutch shaft.	Visual	Replace those components that have cracks or missing or worn gear teeth (para 2-66).
	6. Rough, damaged bearing assemblies.	Feel, Visual	Replace bearings that are rough or damaged (para 2-66).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: CLUTCH ASSEMBLY REMOVED	PARA 2-66	
Clutch Assembly (P/N 12524310)	1. Galled, missing or chipped teeth on clutch gear.	Visual	Replace gear (para 2-66).
	2. Galled, burred, or distorted clutch shaft.	Visual	Replace shaft (para 2-66).
	3. Torque test clutch assembly (para 2-66).	Torque Test	Replace spring and roller if not within limits (para 2-66).
	NOTE: REMOVE ROTOR ASSEMBLY	PARA 2-35	
Forward Feed Assembly (P/N 12524120)	1. Cracked braze joints around standoffs, loose rivets on front feed chute brackets, damaged front feed rotor bushing, damaged round feed path surfaces, damaged front rotor bushing bearing surface.	Visual	Replace forward feed assembly if cracks, loose rivets, or damage are found (para 2-42).
	2. Damaged bearing surfaces of the two feed sprocket flanged bushings and front feeder guide flanged bushing.	Visual and per para 2-42	Replace forward feed assembly if damaged (para 2-42) and forward to Direct Support Maintenance for repair.

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
Forward Feed Assembly (P/N 12524120) (cont)	3. Worn or broken case rim guide surface of cartridge guide.	Visual	Replace cartridge guide if damaged or worn (para 2-34).
	4. Cracked or damaged forward gate spring.	Visual	Replace spring if cracked or damaged (para 2-33).
	5. Worn or chipped cartridge feed path surfaces of forward feed gate.	Visual	Replace forward feed gate if damaged or worn (para 2-33).
	NOTE: UPPER AND LOWER SPROCKETS REMOVED	PARA 2-36	
Upper and Lower Feed Sprocket Assembly (P/N 12524155 and 12524150)	Bent sprocket fingers (out of track and interfering with opposite feed sprocket) and cracks.	Visual, Feel, and per para 2-36	Replace upper/lower feed sprocket assembly if cracked or bent (para 2-36).
	NOTE: STEPPED SPACERS REMOVED	PARA 2-38	
Stepped Spacers (3) (P/N 12524136) and Stand off (1) (P/N 12524115)	Broken, cracked, bent, and stripped threads.	Visual	Replace standoff/ stepped spacers if damaged (para 2-38).

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: ROUND POSITIONER ASSEMBLY REMOVED	PARA 2-43	
Positioner Assembly, Round (P/N 12524160)	1. Cracked, distorted or broken round positioner.	Visual	Replace spring if damaged (para 2-44).
	2. Galled, burred, chipped or broken round positioner and sleeve bushing.	Visual	Replace positioner/ bushings if damaged (para 2-44).
	3. Bent or broken straight headed pins.	Visual	Replace pins if damaged (para 2-44).
	NOTE: EJECTION CHUTE ASSEMBLY REMOVED	PARA 2-32	
Ejection Chute Assembly (P/N 12524110)	1. Cracked or bent ejection chute.	Visual	Replace ejection chute assembly if cracked or bent (para 2-32).
	2. Cracked, missing, or broken flat springs or loose or missing rivets.	Visual	Replace ejection chute assembly if flat springs are broken or missing; or if rivets are loose or missing (para 2-32).
	NOTE: LINK SHIELD REMOVED	PARA 2-40	
Link Shield (P/N 12524103)	Cracked, bent, or missing link shield.	Visual	Replace if damaged or missing (para 2-40).

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
	NOTE: ROTOR ASSEMBLY REMOVED	PARA 2-35	
Rotor Assembly (P/N 12524140)	Twisted, cracked rotor lobes, bent or cracked shaft, galled or stripped internal splines.	Visual	Replace rotor assembly if damaged (para 2-35).
Rear Plate Assembly (P/N 12524190)	1. Galled or burred cartridge feed path surface, cracks, loose or missing rear feed chute brackets of rear feed plate.	Visual	Replace feeder assembly and forward to Direct Support Maintenance for repair (para 2-27).
	2. Worn or chipped cartridge case feed path functional surfaces of rear feed gate assembly.	Visual	Replace feeder assembly and forward to Direct Support Maintenance for repair (para 2-27).
Feeder Drive Assembly (P/N 12524180)	1. Cracked, broken or distorted housing assembly.	Visual	Replace feeder assembly (para 2-27).
	2. Perform feeder manual cycle check.	Para 2-9	Corrective action per manual cycle check.
	3. Cracked, broken, bent, damaged latch notch of feeder handle.	Visual	Replace handle if damaged (para 2-41).

2-6. SEMI-ANNUAL INSPECTION (cont)

COMPONENT	INSPECT FOR	METHOD	CORRECTIVE ACTION AND REMARKS
FEEDER Drive Assembly (P/N 12524180) (cont)	4. Cracked, broken, bent, or worn feeder handle lock tang on feeder handle latch.	Visual	Replace latch if damaged or worn (para 2-41).
	5. Damaged or galled functional surfaces of cam bushings or pins.	Visual, Feel	Replace cam bushing assembly if bushing or pins are damaged (para 2-41).
	6. Damaged or galled functional surfaces of slotted bushing or pins or cracked, bent, or broken bracket.	Visual, Feel	Replace slotted bushing assembly if bushing, pins, or bracket are damaged (para 2-41).

NOTE: If expected response is not obtained, refer to maintenance procedures.		
FUNCTION	PROCEDURE	EXPECTED RESPONSE
BARREL ASSEMBLY		
Check of muzzle brake/ barrel assembly	Attempt to turn muzzle brake.	A slight looseness is to be expected. Muzzle brake shall not rotate.
RECEIVER ASSEMBLY		
1. Check of barrel lock action on receiver assembly	Pull on barrel lock tang and release.	Barrel lock to snap back into position
2. Fit and lock of barrel assembly into receiver assembly	With barrel "ALINE" arrow in line with scribe mark on barrel support assembly, insert barrel into receiver assembly. Rotate barrel clockwise to stop, then attempt to rotate barrel counterclockwise.	Barrel to slide in and rotate without difficulty. "Locked" arrow on barrel to line up with scribe mark on barrel support. Barrel lock to have cammed up and dropped back into place. Barrel cannot be rotated in either direction.
3. Check function of track assembly latch	With track latch on receiver in down position, install track/bolt/carrier assembly in receiver. Raise latch handle to bottom of receiver.	Latch to engage track assembly with firmness. The bolt carrier to move onto rear receiver track without binding.
4. Check of Sear/Sear Catch Assembly	With track/bolt/carrier assembly installed and in "Sear" position, attempt to rotate receiver vertical drive shaft in either direction.	Except for a slight motion, the bolt/carrier assembly shall not move in either direction.

2-6. SEMI-ANNUAL INSPECTION (cont)

FUNCTION	PROCEDURE	EXPECTED RESPONSE
5. Check of Sear System	Pull sear release link towards sear solenoid and then release.	The sear assembly to move away from the chain assembly sufficiently to allow the chain assembly to rotate. The push rod extension finger to rise above receiver rear deck. Upon release of sear release link, the sear assembly shall move back into position to engage chain assembly sear and safety links and the push rod finger to drop down without difficulty.
6. Check action of Safety Interlock System (SIS)	With continual force on sear release link towards sear solenoid, rotate bolt carrier assembly towards the rear to depress the push rod extension. Then move bolt carrier forward to mid-RAM position. With force still on release link, strike the SIS rocker sharply with a non-steel rod.	The sear assembly moves away from chain assembly and push rod extension rises into position.
7. Check Receiver Vertical Drive Shaft Action and Lock	Depress center button on vertical drive shaft and pull shaft down to retaining ring stop. Raise shaft with button depressed to full up position, release button and pull on handle.	The drive shaft to disengage from lock, move down and up freely and to re-engage lock without difficulty. The drive shaft shall not move downward when pulled.

FUNCTION	PROCEDURE	EXPECTED RESPONSE
8. Manual operational check of receiver power drive system, operation of Track/Bolt/Carrier Assembly	With gun safety knob in "FIRE" position and vertical drive shaft in down position, disengage wear assembly and rotate drive shaft counterclockwise. Release sear release link and continue to rotate drive shaft until bolt/carrier assembly is forward and locked (misfire position). Disengage sear assembly momentarily and continue to rotate drive shear until bolt/carrier assembly stops in the rear position (sear).	The bolt/carrier assembly shall move out of Sear position through dwell (feed), thru RAM, cock the firing pin while bolt assembly rotates (clockwise) to locked position, releases the firing pin (loud snap sound) moves through forward dwell and stops at "misfire" position (bolt locked). The bolt/carrier assembly shall move out of misfire. Reset the firing pin while bolt rotates counterclockwise to unlock position. The firing pin tang as it moves towards the rear shall depress the firing pin pawl and once clear of the tang shall snap up back into position. The bolt/carrier shall then move to the sear position and be stopped by the sear assembly. The manual operation shall have been reasonably free of roughness and binds with the exception of cocking and resetting of the firing pin where high firing pin spring tension must be overcome.

FUNCTION	PROCEDURE	EXPECTED RESPONSE
9. Check of gun safety system	Turn gun safety knob (clockwise) from "FIRE" to "SAFE" and repeat procedure from item 8.	Some rotational resistance of knob is to be expected. The safety pawl shall rise and fall back slightly. During the manual cycling of the gun, the firing pin shall cock, rotate, but not fall forward (no loud snap sound).
10. Check sear retractor assembly	With receiver assembly in "sear", push firmly on left rear side of sear retractor. Turn vertical drive shaft counterclockwise one turn. Then turn shaft clockwise until bolt/carrier stops in "Sear". Press right rear side of sear retractor. Attempt to turn vertical drive shaft in either direction.	Sear retractor shall engage sear assembly and pull it away from chain assembly allowing bolt/carrier assembly to move into feed (rear dwell) position. When sear retractor is pressed on right side, the sear assembly will disengage and prevent the bolt/carrier assembly from moving in either direction.
FEEDER ASSEMBLY		
1. Check of feeder locking handle and lock operation	Set feeder assembly vertically on front end with feeder handle in up or down position. Pull/push on handle with some force. Disengage feeder handle latch and move handle to opposite position until locked. Again pull/push on handle with some force.	The feeder handle shall not move.

FUNCTION	PROCEDURE	EXPECTED RESPONSE
2. Hand cycling of feeder assembly	Set feeder assembly on front end, press in center rod of worm shaft assembly -- at the same time, turn worm shaft assembly counterclockwise, release rod and continue turning shaft until it stops. Repeat procedure eight times. Alternate between AP and HE feed between each cycle.	The feeder assembly worm shaft shall rotate without excessive roughness or binds. The arrow on distributor cover shall move clockwise from "Sear" position to "Sear" position. If there is a bind when the indicator is in "Feed", a possibility exists that the index drive cover assembly may be installed incorrectly and needs to be repositioned. Forward to Direct Suport for repair. Some force is required in manually positioning the feed select solenoid from AP to HE and vice-versa. When in AP feed, the feed select knob is in and the upper feed sprocket will turn. The upper feed shaft stop shall move up and drop down once per cycle of the indicator. When in HE feed the select knob is out, the lower feed sprocket shall turn and the lower feed shaft stop shall move up and down.

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FUNCTION	PROCEDURE	EXPECTED RESPONSE
3. Check operation of forward feeder gate without dummies	Move forward gate to extreme limits of travel in both directions.	The forward feeder gate in mid or neutral position shall be free to move slightly in either direction. As the gate is moved further, the spring force resisting movement shall increase until limit of travel is reached. The round feed path shall be without burrs at the gate transition points. The gate shall return to neutral when released.
4. Check operation of aft feeder gate without dummies	Move aft gate to extreme limits of travel in both directions.	The aft gate shall move freely in direction of AP feed. In direction of HE feed, there shall be increased spring force resistance until limit of travel is reached. The round feed path shall be without burrs at the gate transition points. The gate shall move towards AP feed path when released.
5. Check round positioner assembly operation without dummies	Move round positioner across opening of rotor assembly approximately ±6mm.	The round positioner shall move against increasing spring force resistance in each direction and when released shall return to mid or neutral position. The neutral position shall be approximately mid point of rotor assembly opening.

FUNCTION	PROCEDURE	EXPECTED RESPONSE
M-242 ASSEMBLY		
1. Fit of feeder assembly onto receiver assembly	With feeder assembly in sear and locked, with receiver assembly in sear and locked, the feeder handle in up position, receiver drive shaft in down position, place feeder assembly about halfway on top of receiver assembly and slide forward. Release and lower feeder handle to down locked position. Raise and lock receiver drive shaft.	The feeder assembly shall slide forward and engage front guide pin on receiver assembly without excessive binding. The feeder handle shall move without excessive force. The receiver drive shaft shall move without excessive force.

FUNCTION	PROCEDURE	EXPECTED RESPONSE
2. Hand cycling M-242 assembly with dummies	With barrel assembly installed and gun assembly in sear, feed select knob in AP feed, load one dummy round in AP (upper) side of feeder assembly using a 14mm wrench on end of AP shouldered shaft and cranking clockwise until dummy round is seated against AP upload stop. Turn wrench counterclockwise to seat CAM of shouldered shaft against AP feed stop.	As dummies are loaded into the feeder, the AP and HE feed stops shall rise and fall for each dummy. The upload stops shall prevent rounds from going into the rotor assembly. The feed stops shall prevent rounds from backing out of the feeder.
	Shift feed select knob to HE and two dummies in HE side (lower) of feeder by turning the HE shouldered shaft counterclockwise until dummy is seated against HE upload stop. Turn wrench clockwise to seat shouldered shaft against HE feed stop.	As each dummy is transferred from a feed sprocket into the rotor, the transfer shall be crisp and positive with no rocking of the dummy.

Section IV. TROUBLESHOOTING

2-7. GENERAL 2-7

a. Troubleshooting procedures are limited to those listed in the troubleshooting symptom index. Other malfunctions or unusual conditions noted, but not authorized for repair at Organizational Level, will be referred to Direct Support Maintenance personnel.

b. Section IV consists of the following:

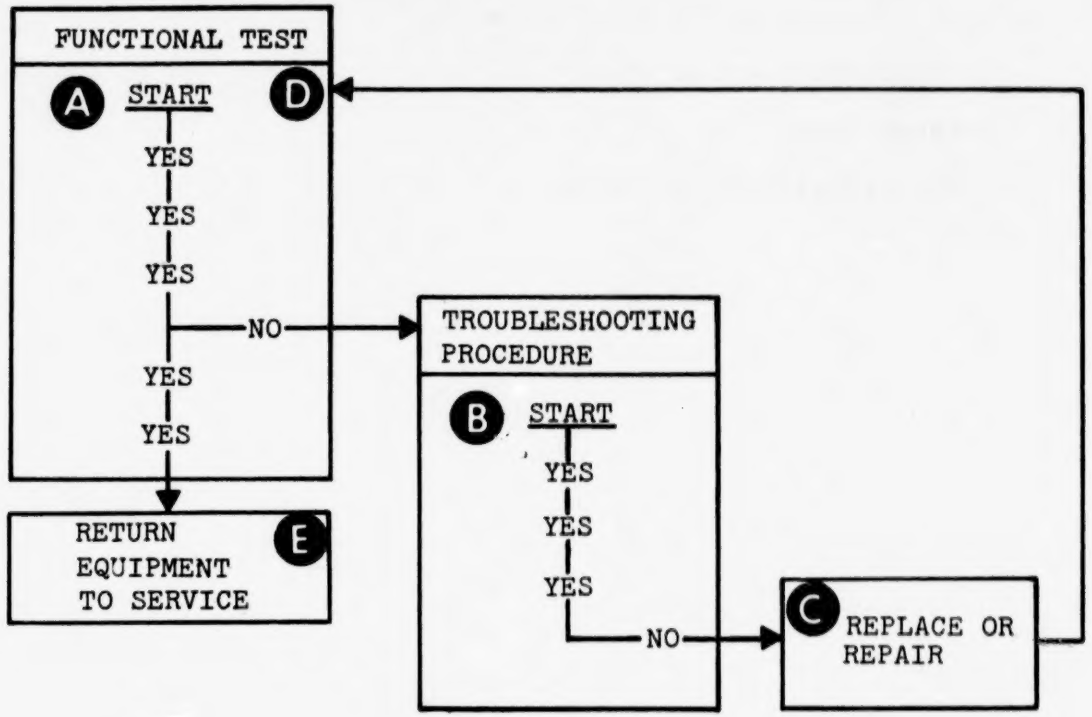
Troubleshooting Overview

Symptom Index

Troubleshooting Procedures

TROUBLESHOOTING OVERVIEW

a. This procedure is designed to isolate failures in the gun system. The procedure should start with a step by step functional test in the Operator's Manual to identify the problem. The functional test sends the mechanic to troubleshooting procedures, isolating the malfunction. When the malfunction is located, the mechanic is sent to the replace or repair paragraph. After the repair is finished, the mechanic is sent back to the functional test. This verifies a successful repair. After a successful test, the gun is returned to service.



Ⓐ Functional test shows a failure.

Ⓑ Failed component identified.

Ⓒ Failed component repaired or replaced.

Ⓓ Functional test begun again.

Ⓔ Functional test successfully completed.

b. A failure symptom index is included as a general reference to the troubleshooting procedures. **ALWAYS START THE PROCEDURE WITH THE FUNCTIONAL TEST IN ORDER TO VERIFY THE SYMPTOM, AND END THE PROCEDURE WITH THE FUNCTIONAL TEST IN ORDER TO VERIFY THE REPAIR.**

TROUBLESHOOTING (cont)

SYMPTOM INDEX

NOTE

This check/symptom index can only be used as a general reference to troubleshooting. Troubleshoot your gun in the order shown by the diagrams. Always do the functional test first in order to verify the symptom. After repair, repeat the functional test to verify proper function.

Check	Paragraph No.
Electrical Check	2-8
Feeder Manual Cycle Check	2-9
Receiver Manual Cycle Check	2-10
Symptom	
Gun Fires at Reduced Rate	2-11
Gun Will Not Fire	2-12
Gun Will Not Stop in Sear Position	2-13
Gun Stalls	2-14
Gun Cycles But Will Not Fire	2-15
Gun Fires With Safety On	2-16
Gun Fires Intermittently	2-17
Excessive Recoil or Inadequate Dampening	2-18
Gun Fires at Irregular Rate	2-19
Gun Fires Without Hangfire Protection	2-20

TROUBLESHOOTING (cont)

2-8. ELECTRICAL CHECKOUT

INITIAL SETUP

Applicable Configurations

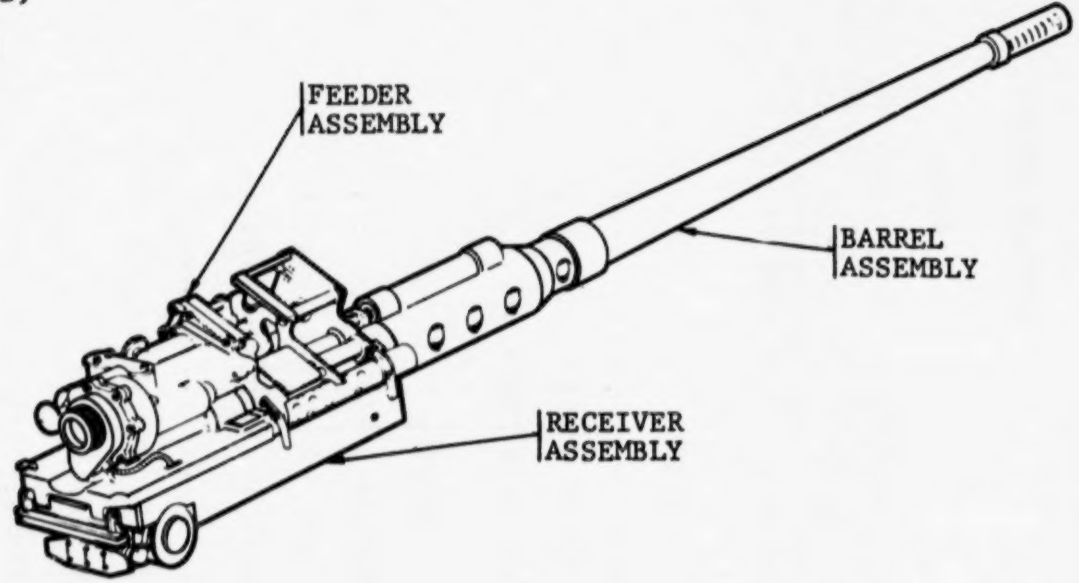
All

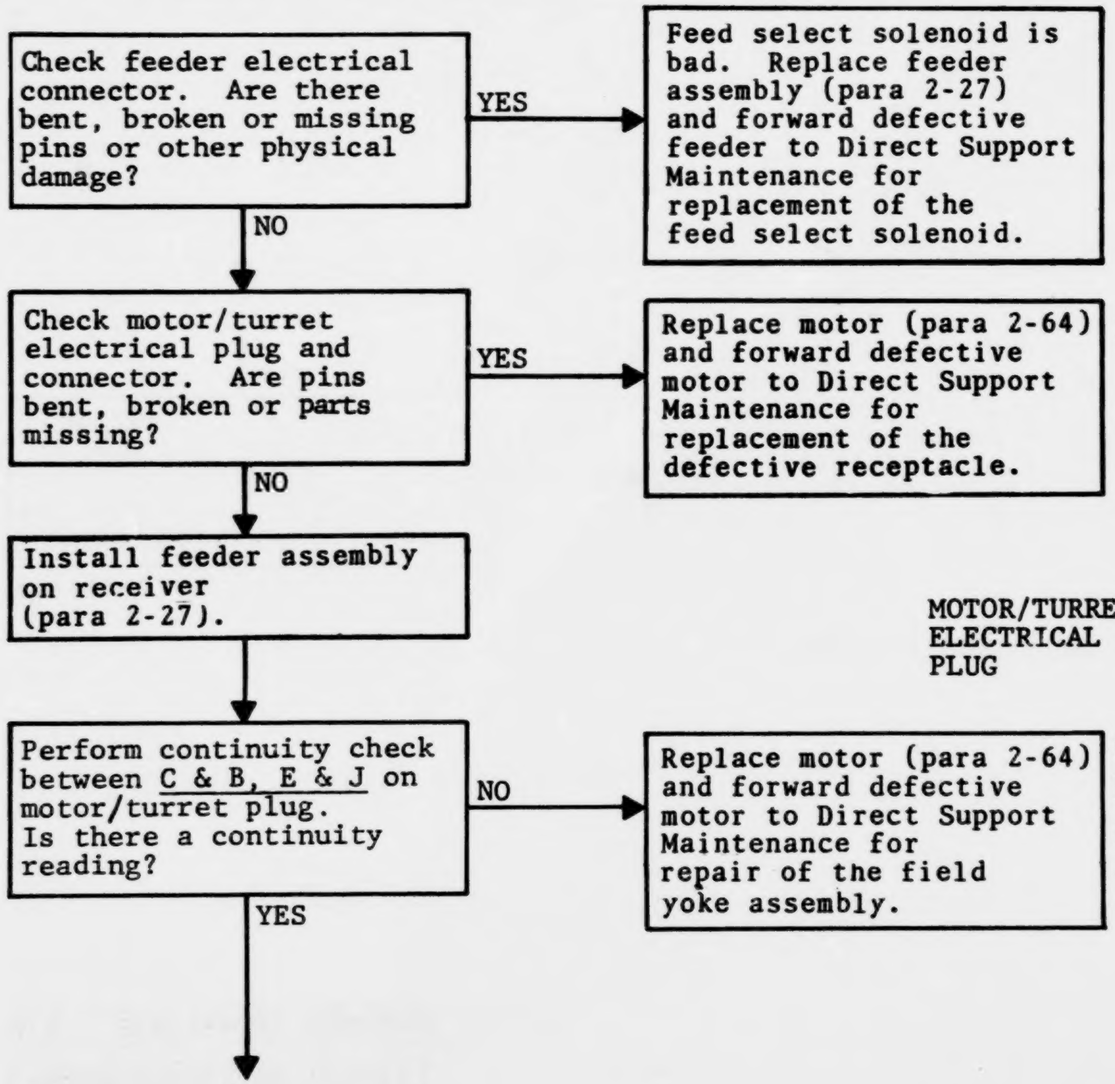
Tools/Test and Support Equipment

Multimeter
  ANURM 105C (Item 2, App B)
Hand Crank Assembly
  12524015 (Item 5, App B)

Personnel Required

45T Turret Mechanic


FEEDER ASSEMBLY
BARREL ASSEMBLY
RECEIVER ASSEMBLY



Check feeder electrical connector. Are there bent, broken or missing pins or other physical damage?

YES → Feed select solenoid is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for replacement of the feed select solenoid.

NO ↓

Check motor/turret electrical plug and connector. Are pins bent, broken or parts missing?

YES → Replace motor (para 2-64) and forward defective motor to Direct Support Maintenance for replacement of the defective receptacle.

NO ↓

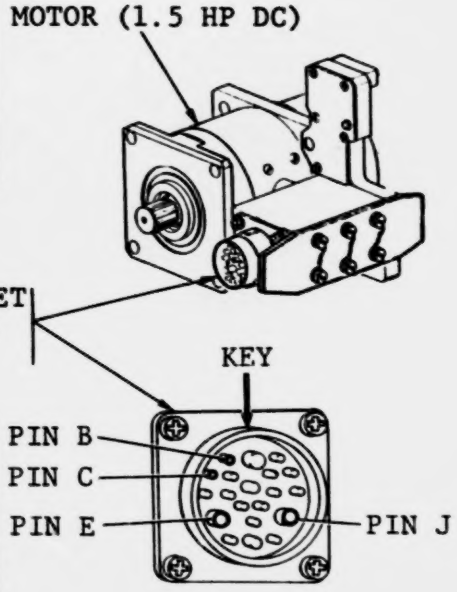
Install feeder assembly on receiver (para 2-27).

↓

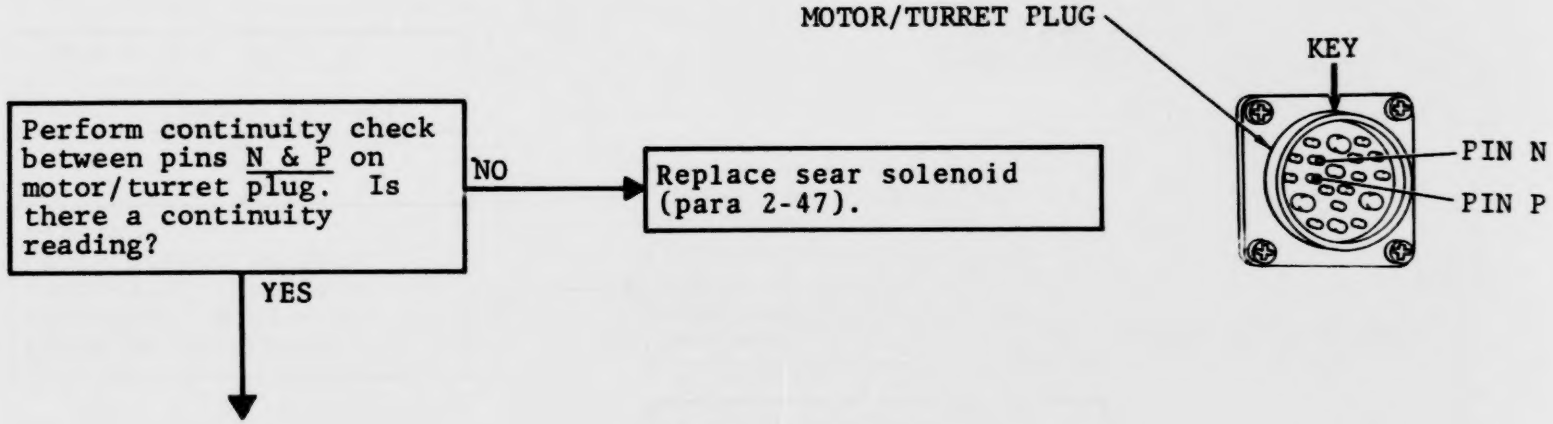
Perform continuity check between C & B, E & J on motor/turret plug. Is there a continuity reading?

NO → Replace motor (para 2-64) and forward defective motor to Direct Support Maintenance for repair of the field yoke assembly.

YES ↓



2-8. ELECTRICAL CHECKOUT (cont)



Perform continuity check between pins N & P on motor/turret plug. Is there a continuity reading?

NO

Replace sear solenoid (para 2-47).

YES

MOTOR/TURRET PLUG
KEY
PIN N
PIN P

Manually actuate sear solenoid and hold thru this block of checks. Perform continuity checks between pins N & D, N & P, and D & P on motor/turret plug. Is there a continuity reading? If not, reverse meter leads and repeat checks. Is there a contintuity reading?

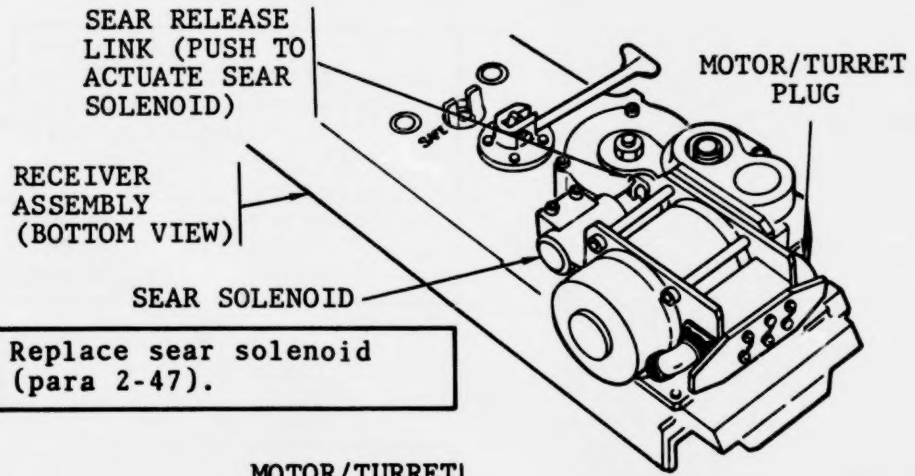
NO → Replace sear solenoid (para 2-47).

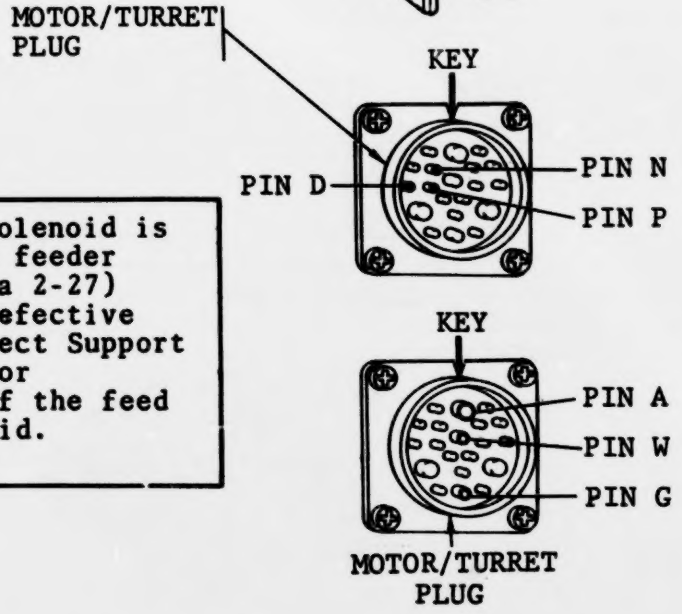
YES ↓

Perform continuity check between pins A & W and A & G on motor/turret plug. Is there a continuity reading? If not, reverse meter leads and repeat pin checks. Is there a continuity reading?

NO → Feed select solenoid is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for replacement of the feed select solenoid.

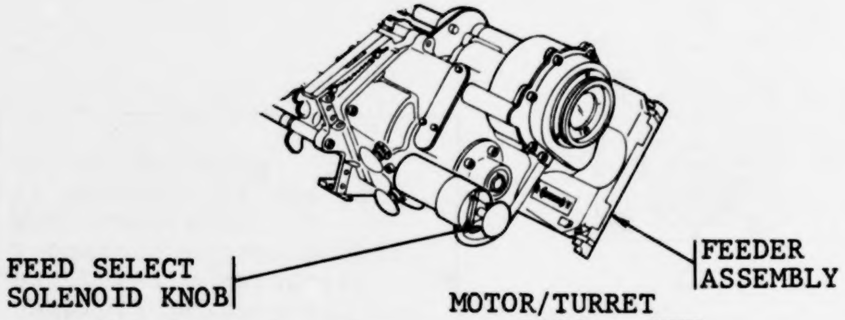
YES ↓


SEAR RELEASE LINK (PUSH TO ACTUATE SEAR SOLENOID)
MOTOR/TURRET PLUG
RECEIVER ASSEMBLY (BOTTOM VIEW)
SEAR SOLENOID


MOTOR/TURRET PLUG
KEY
PIN N
PIN D
PIN P
KEY
PIN A
PIN W
PIN G
MOTOR/TURRET PLUG

TROUBLESHOOTING (cont)

2-8. ELECTRICAL CHECKOUT (cont)

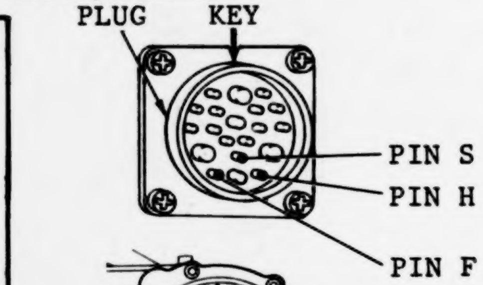

FEED SELECT SOLENOID KNOB
FEEDER ASSEMBLY

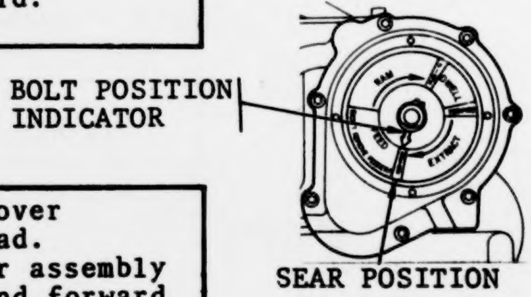
Pull feed select knob to HE position and check continuity between pins S & F on motor/turret plug. Push feed select knob to AP position and check continuity between pins H & F. Is there continuity in both positions?

NO

Feed select solenoid is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for replacement of the feed select solenoid.

YES


MOTOR/TURRET PLUG
KEY
PIN S
PIN H
PIN F

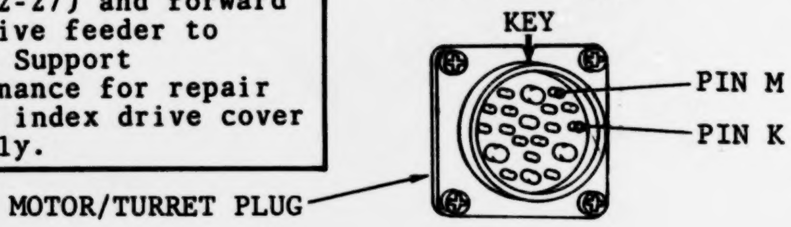

BOLT POSITION INDICATOR
SEAR POSITION

Ensure bolt position indicator on feeder is in SEAR position. Perform a continuity check between pins M & K on motor/turret plug. Is there a continuity reading between M & K?

NO

Index drive cover assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair of the index drive cover assembly.

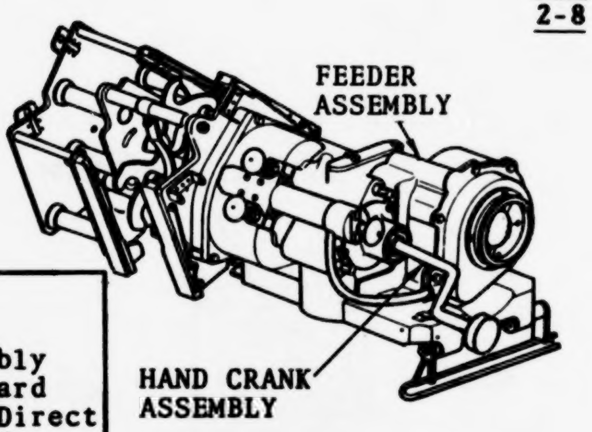
YES

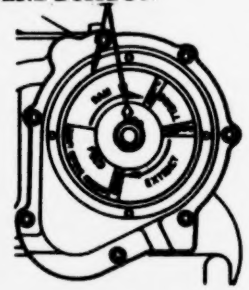

KEY
PIN M
PIN K
MOTOR/TURRET PLUG

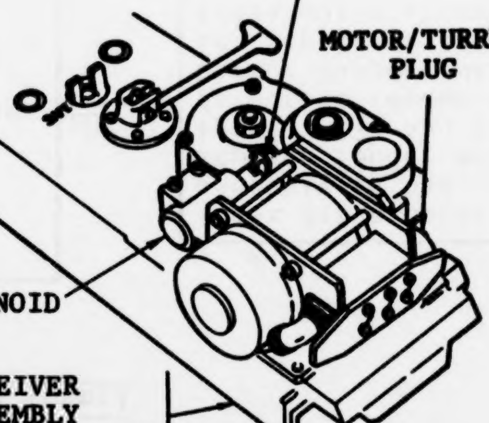
Press sear release link and use hand crank assembly. Manually rotate gun until bolt position indicator on feeder is pointing to the beginning of the RAM arrow. Perform a continuity check between pins L & M on motor/turret plug. Is there a continuity reading between pins L & M?

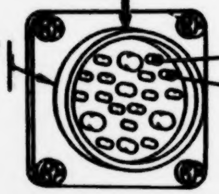
NO → Index drive cover assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair of the index drive cover assembly.

YES ↓


FEEDER ASSEMBLY
HAND CRANK ASSEMBLY


BOLT POSITION INDICATOR


SEAR RELEASE LINK (PUSH TO ACTUATE SEAR SOLENOID)
MOTOR/TURRET PLUG
SEAR SOLENOID
RECEIVER ASSEMBLY (BOTTOM VIEW)


KEY
MOTOR/TURRET PLUG
PIN M
PIN L

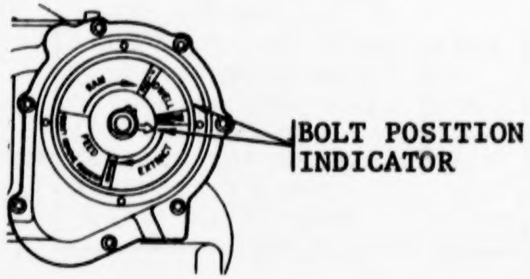
TROUBLESHOOTING (cont)

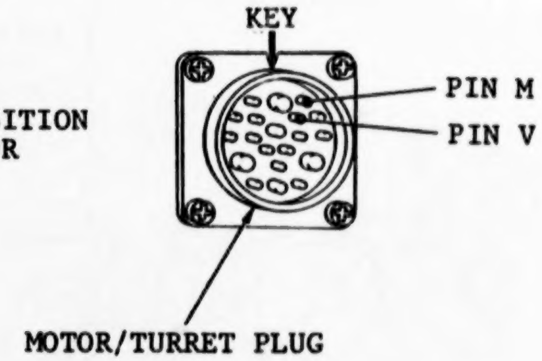
2-8. ELECTRICAL CHECKOUT (cont)

Press sear release link and use hand crank assembly. Manually rotate gun until bolt position indicator on feeder is pointing to the A in the word EXTRACT. Perform continuity check between pins M & V on motor/turret plug. Is there continuity between pins M & V?

NO → Index drive cover assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair of the index drive cover assembly.

YES ↓ If problems continue, notify Direct Support Maintenance.





TROUBLESHOOTING (cont)

2-9. FEEDER MANUAL CYCLE CHECK

INITIAL SETUP

Applicable Configurations

All

Tools/Test and Support Equipment

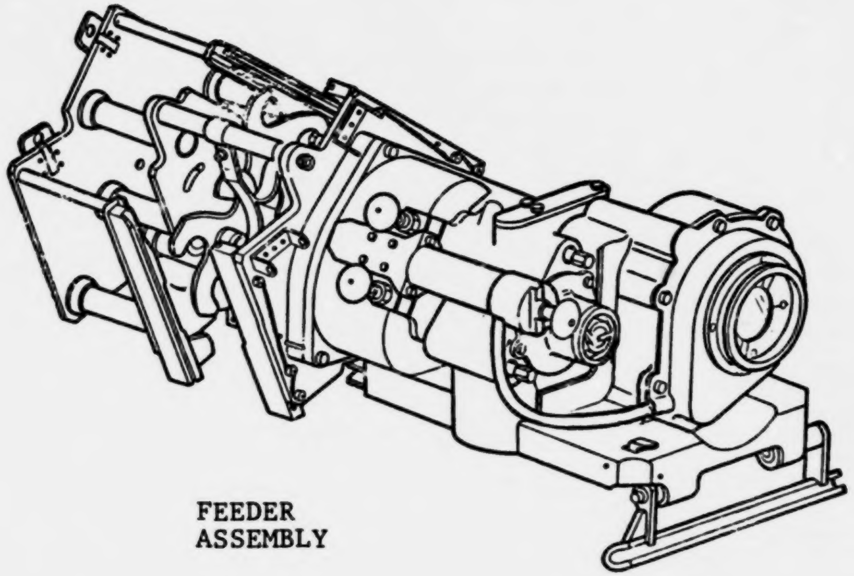
Turret Mechanic's Tool Kit
SC5180-95CLB19
(Item 1, App B)
Dummy Cartridge With Link
9341746 (Item 3, App B)

Personnel Required

45T Turret Mechanic

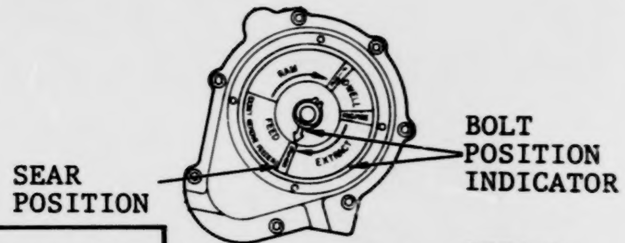
Equipment Conditions

Feeder assembly removed
(para 2-27)



NOTE

Check that bolt position indicator is in sear position.


SEAR POSITION
BOLT POSITION INDICATOR

Push and pull feed select solenoid knob. Does handle move freely and snap into position with a distinct click?

NO → Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

YES ↓

Stand feeder assembly on forward end and attempt to turn worm shaft nut counterclockwise. Does worm shaft turn one . complete revolution?

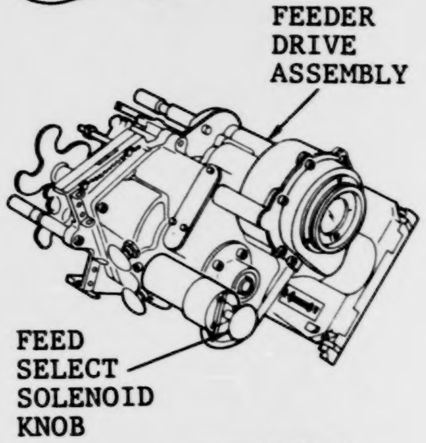
YES → Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

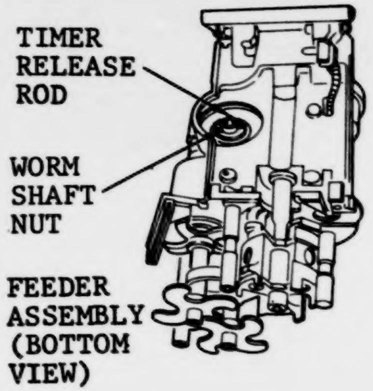
NO ↓

Push timer release rod and turn worm shaft nut nine turns counterclockwise. Does worm shaft lock with a distinct click?

NO → Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

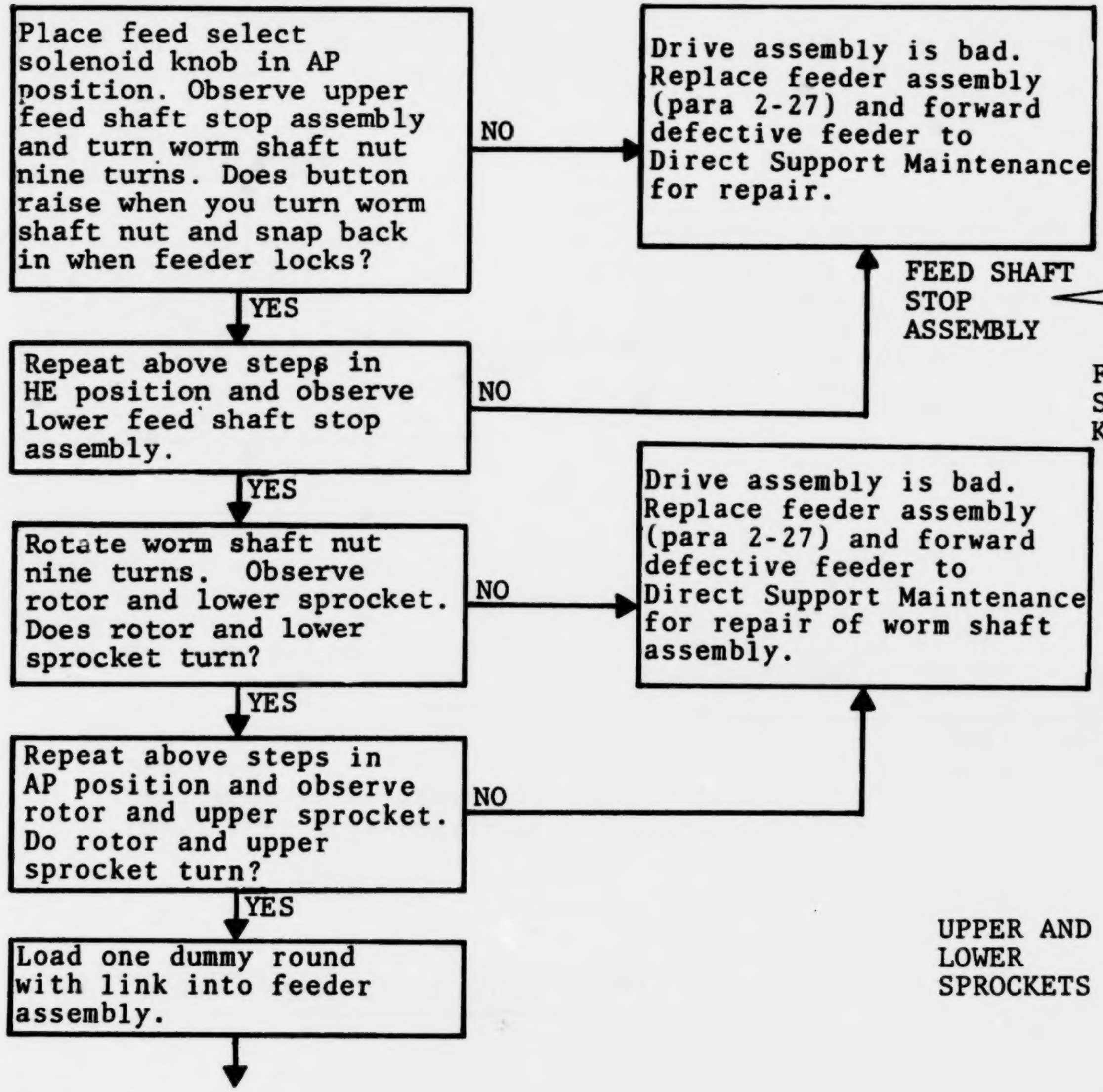
YES ↓


FEEDER DRIVE ASSEMBLY
FEED SELECT SOLENOID KNOB


TIMER RELEASE ROD
WORM SHAFT NUT
FEEDER ASSEMBLY (BOTTOM VIEW)

TROUBLESHOOTING (cont)

2-9. FEEDER MANUAL CYCLE CHECK (cont)



Place feed select solenoid knob in AP position. Observe upper feed shaft stop assembly and turn worm shaft nut nine turns. Does button raise when you turn worm shaft nut and snap back in when feeder locks?

NO: Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

YES: Repeat above steps in HE position and observe lower feed shaft stop assembly.

NO: Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

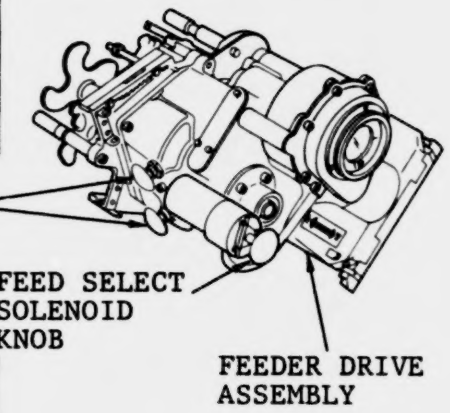
YES: Rotate worm shaft nut nine turns. Observe rotor and lower sprocket. Does rotor and lower sprocket turn?

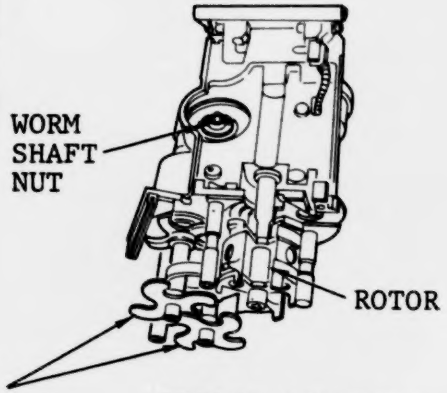
NO: Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair of worm shaft assembly.

YES: Repeat above steps in AP position and observe rotor and upper sprocket. Do rotor and upper sprocket turn?

NO: Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair of worm shaft assembly.

YES: Load one dummy round with link into feeder assembly.





FEEDER ASSEMBLY (BOTTOM VIEW)

2-9. FEEDER MANUAL CYCLE CHECK (cont)

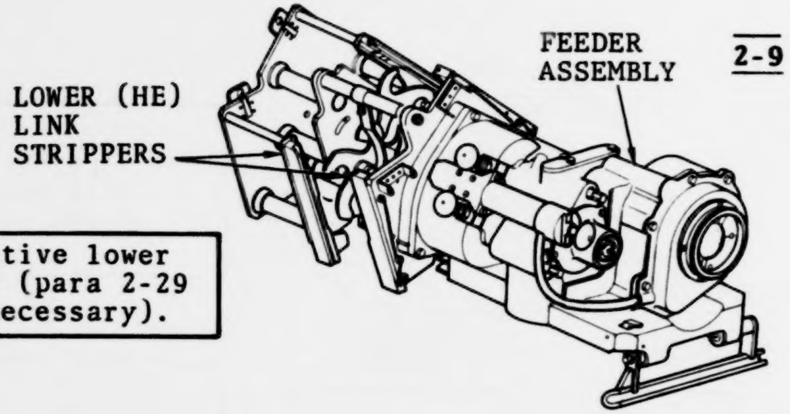
NOTE

Do not turn worm shaft nut before pushing timer release rod. If feeder binds, tap worm shaft nut clockwise with plastic-face hammer to loosen.

Push timer release rod and hold. Turn worm shaft nut by hand. Manually cycle one dummy cartridge with link thru lower (HE) side of forward feed assembly. Did link cycle thru link stripper without problems?

NO

Replace defective lower link stripper (para 2-29 or 2-31, as necessary).


FEEDER ASSEMBLY
LOWER (HE) LINK STRIPPERS

YES

Did sprockets strip round from link?

NO

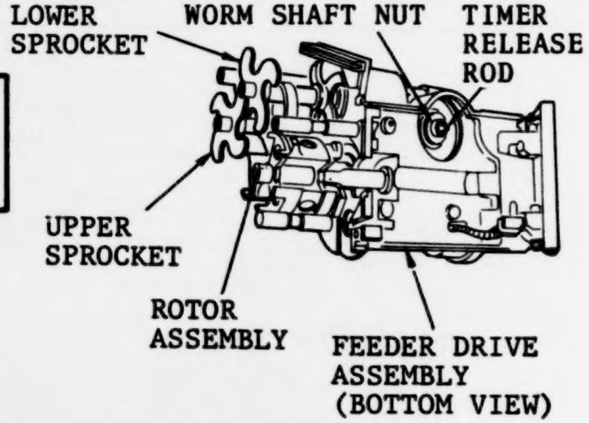
Remove sprockets and check for bent sprocket leg (para 2-36). Are sprocket legs bent?

YES

Replace sprocket (para 2-36).

NO

Install sprockets (para 2-36). Replace ammunition and start at top of this page again.


LOWER SPROCKET
WORM SHAFT NUT
TIMER RELEASE ROD
UPPER SPROCKET
ROTOR ASSEMBLY
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)

YES

Did round transfer from HE sprocket to rotor?

YES

Check rotor for galls, breaks and bends. Do these conditions exist?

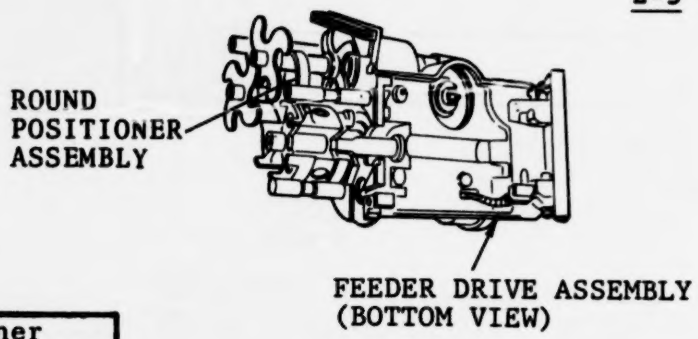
YES

Replace rotor assembly (para 2-35).

NO

TROUBLESHOOTING (cont)

2-9. FEEDER MANUAL CYCLE CHECK (cont)


ROUND POSITIONER ASSEMBLY
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)

Did round have a distinct snap during transfer?

NO

Check round positioner assembly for broken or bent spring, galled or broken positioner, broken or missing pins or bushings. Do these conditions exist?

YES

Repair round positioner assembly (para 2-44).

NO

YES

NO

Did round attempt to cock during transfer?

YES

Deflect round positioner assembly to one side then to other side about 3-mm in each direction. Did positioner nose return to center of rotor?

YES

Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

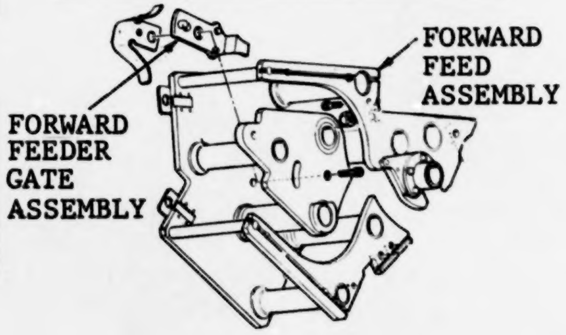
NO

Check forward feeder gate for binding cracks or broken gate, weak or broken spring. Do these conditions exist?

YES

Replace forward feeder gate and/or defective springs (para 2-33).

NO


FORWARD FEED ASSEMBLY
FORWARD FEEDER GATE ASSEMBLY

2-9. FEEDER MANUAL CYCLE CHECK (cont)

Check rear feeder gate for binding or broken gate, weak or broken spring. Do these conditions exist?

YES → Rear feed gate is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

NO ↓

Check cartridge guide for breaks and bends. Do these conditions exist?

YES → Replace cartridge guide (para 2-34).

NO ↓

Does upper eject guide control and guide rear of cartridge?

NO → Replace upper eject guide (para 2-39).

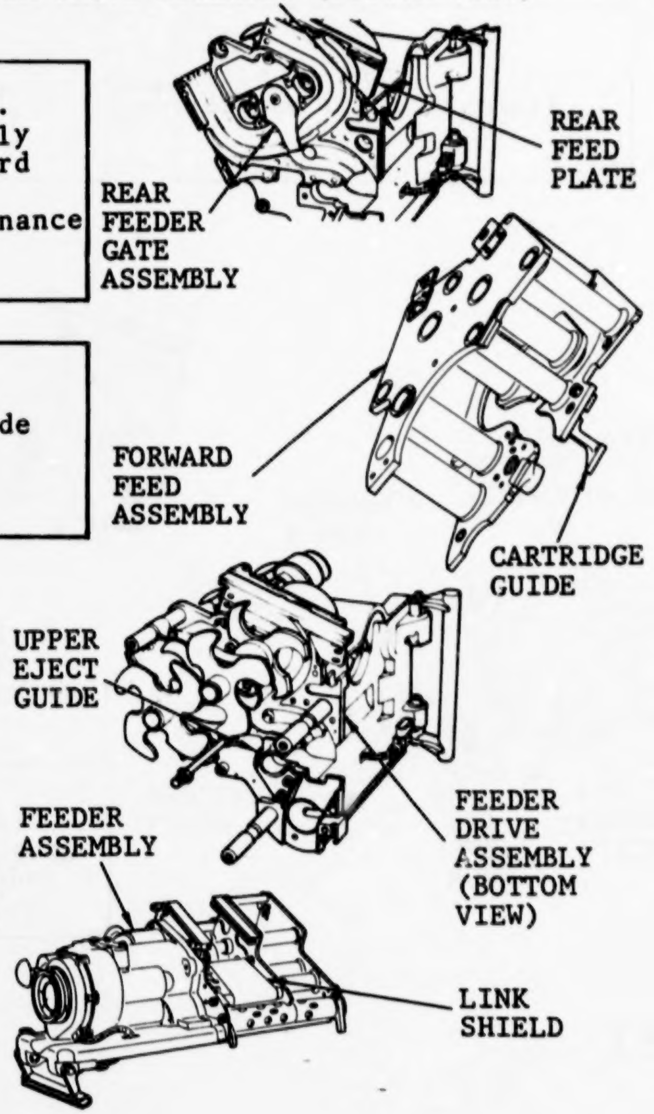
YES ↓

Check link shield for cracks and bends. Do these conditions exist?

YES → Replace link shield (para 2-40).

NO ↓

FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)


REAR FEED PLATE
REAR FEEDER GATE ASSEMBLY
FORWARD FEED ASSEMBLY
CARTRIDGE GUIDE
UPPER EJECT GUIDE
FEEDER ASSEMBLY
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)
LINK SHIELD

2-9. FEEDER MANUAL CYCLE CHECK (cont)

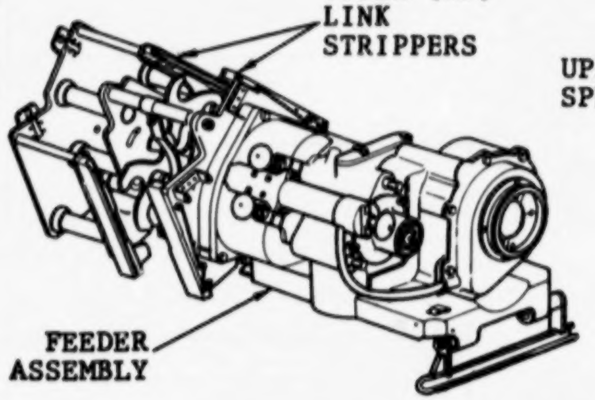
NOTE

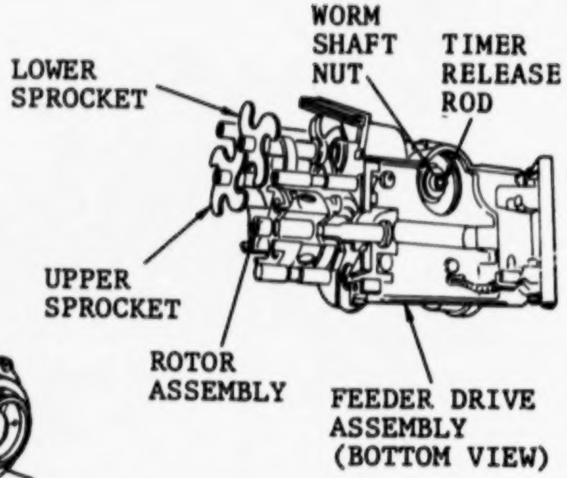
Do not turn worm shaft nut before pushing timer release rod. If feeder binds, tap worm shaft nut clockwise with plastic-face hammer to loosen.

Push timer release rod and hold. Turn worm shaft nut by hand. Manually cycle one dummy cartridge with link thru lower (AP) side of forward feed assembly. Did link cycle thru link stripper without problems?

NO → Replace defective upper link stripper (para 2-28 or 2-30 as necessary).

YES ↓


UPPER (AP) LINK STRIPPERS
FEEDER ASSEMBLY


LOWER SPROCKET
WORM SHAFT NUT
TIMER RELEASE ROD
UPPER SPROCKET
ROTOR ASSEMBLY
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)

Did round transfer from AP sprocket to rotor?

NO → Check rotor for galls, breaks and bends. Do these conditions exist?

YES → Replace rotor assembly (para 2-35).

NO ↓

YES ↓

Did round have a distinct snap during transfer?

NO

Check round positioner assembly for broken or bent spring, galled or broken positioner, broken or missing pins or bushings. Do these conditions exist?

YES

Repair round positioner assembly (para 2-44).

NO

YES

Did round attempt to cock during transfer?

YES

Deflect round positioner assembly to one side then to other side about 3-mm in each direction. Did positioner nose return to center of rotor?

NO

YES

Drive assembly is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

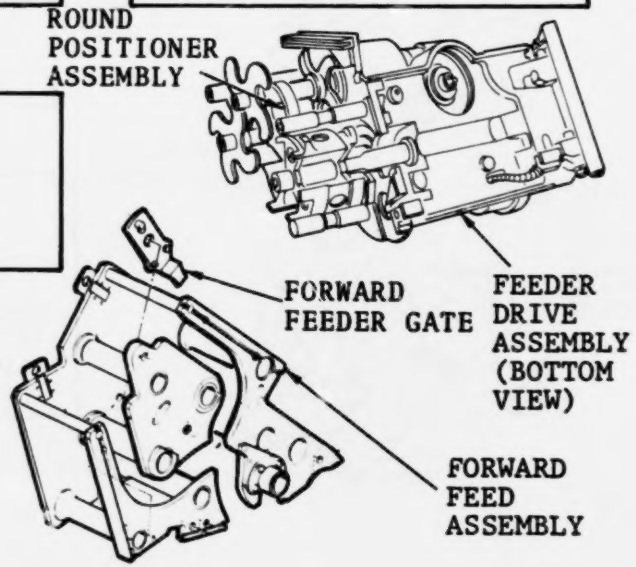
NO

Check forward feeder gate for binding cracks or broken gate, fatigued or broken spring. Do these conditions exist?

YES

Replace forward feeder gate and/or defective springs (para 2-33).

NO


ROUND POSITIONER ASSEMBLY
FORWARD FEEDER GATE
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)
FORWARD FEED ASSEMBLY

2-9. FEEDER MANUAL CYCLE CHECK (cont)

Check rear feeder gate for binding or broken gate, fatigued or broken spring.
Do these conditions exist?

YES → Rear feed plate is bad. Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair.

NO ↓

Check cartridge guide for breaks and bends. Do these conditions exist?

YES → Replace cartridge guide (para 2-34).

NO ↓

Does upper eject guide control and guide rear of cartridge?

NO → Replace upper eject guide (para 2-39).

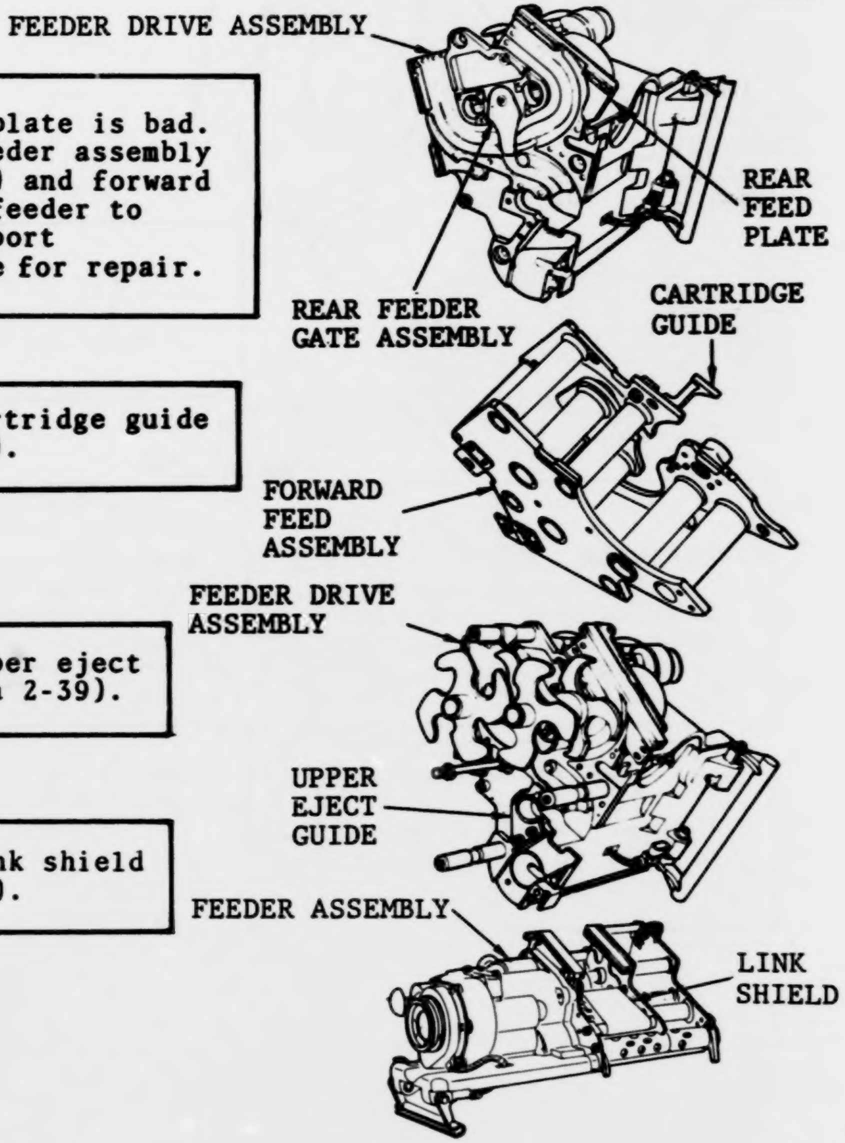
YES ↓

Check link shield for cracks and bends. Do these conditions exist?

YES → Replace link shield (para 2-40).

NO ↓

If problems continue, notify Direct Support Maintenance.


FEEDER DRIVE ASSEMBLY
REAR FEED PLATE
REAR FEEDER GATE ASSEMBLY
CARTRIDGE GUIDE
FORWARD FEED ASSEMBLY
FEEDER DRIVE ASSEMBLY
UPPER EJECT GUIDE
FEEDER ASSEMBLY
LINK SHIELD

TROUBLESHOOTING (cont)

2-10. RECEIVER MANUAL CYCLE CHECK

INITIAL SETUP

Applicable Configurations

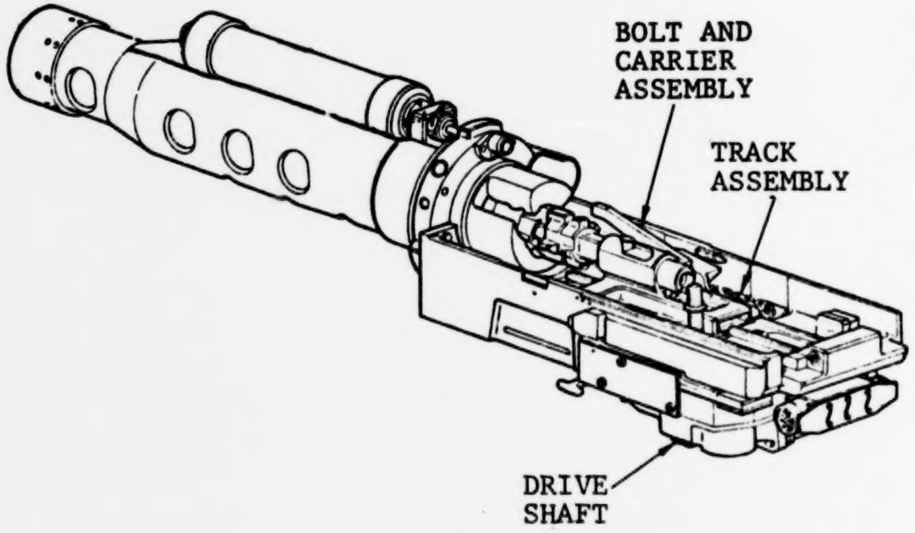
All

Personnel Required

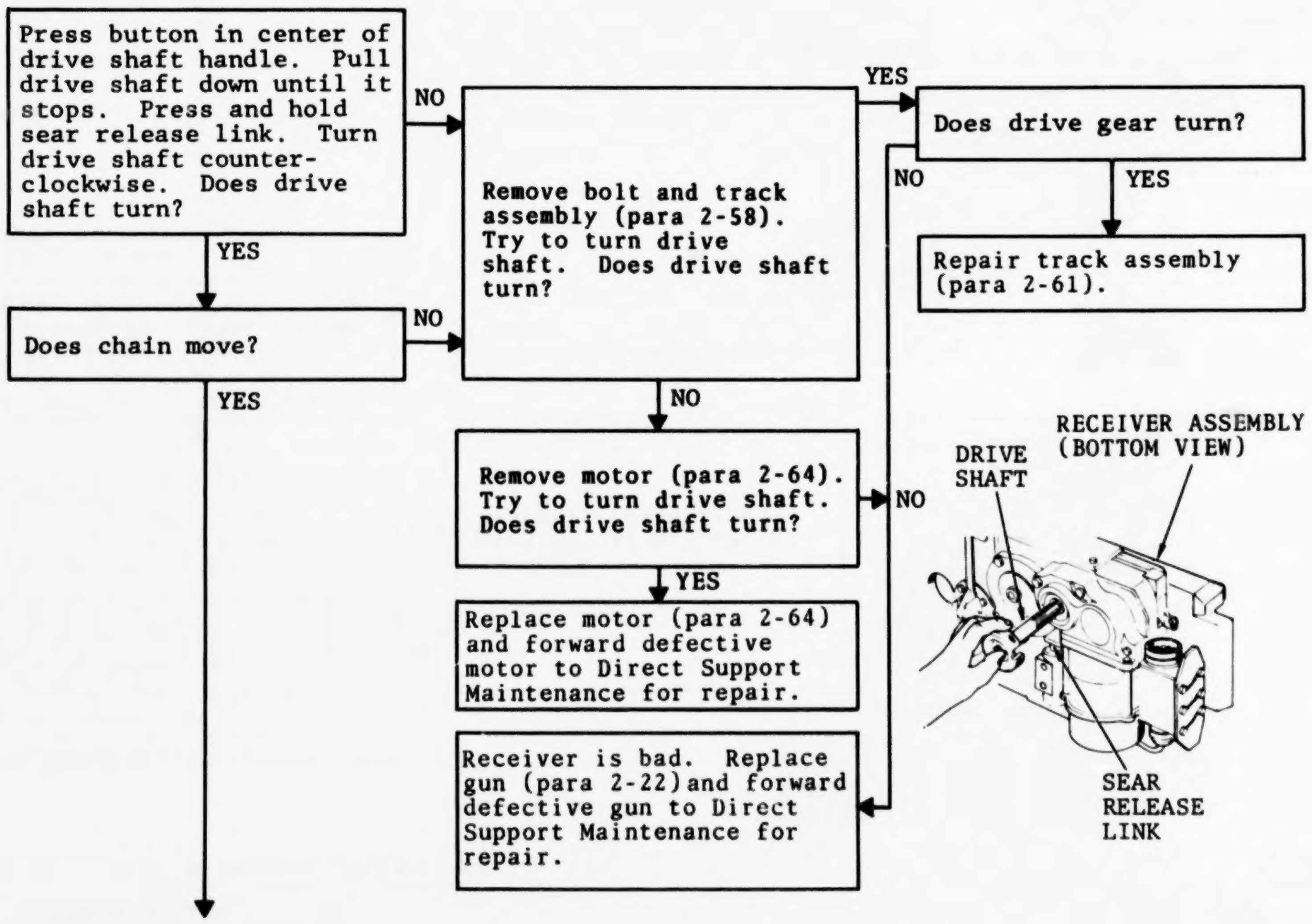
45T Turret Mechanic

Equipment Conditions

Feeder assembly removed (para 2-27)

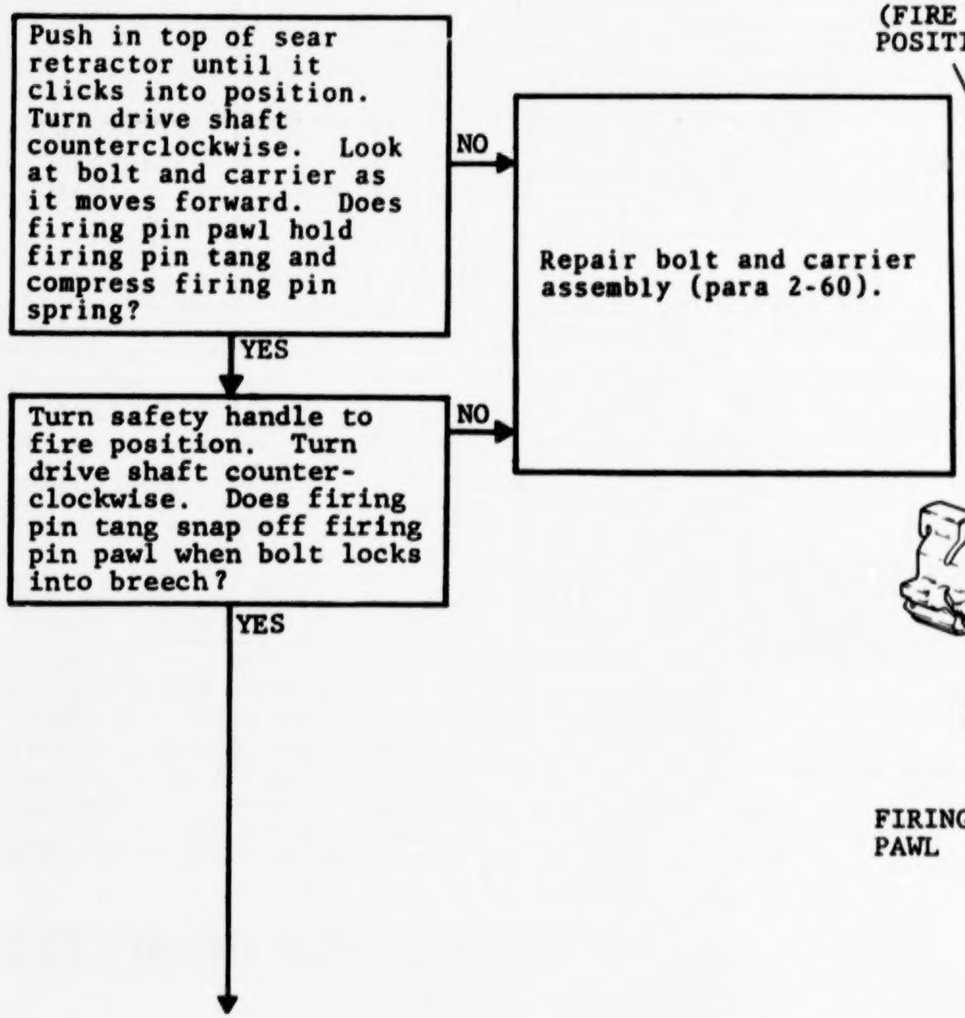

BOLT AND CARRIER ASSEMBLY
TRACK ASSEMBLY
DRIVE SHAFT

2-10. RECEIVER MANUAL CYCLE CHECK (cont)


Press button in center of drive shaft handle. Pull drive shaft down until it stops. Press and hold sear release link. Turn drive shaft counter-clockwise. Does drive shaft turn?
NO
YES
Does chain move?
NO
YES
Remove bolt and track assembly (para 2-58). Try to turn drive shaft. Does drive shaft turn?
YES
NO
Does drive gear turn?
NO
YES
Repair track assembly (para 2-61).
Remove motor (para 2-64). Try to turn drive shaft. Does drive shaft turn?
NO
YES
Replace motor (para 2-64) and forward defective motor to Direct Support Maintenance for repair.
Receiver is bad. Replace gun (para 2-22) and forward defective gun to Direct Support Maintenance for repair.
RECEIVER ASSEMBLY (BOTTOM VIEW)
DRIVE SHAFT
SEAR RELEASE LINK

TROUBLESHOOTING (cont)

2-10. RECEIVER MANUAL CYCLE CHECK (cont)



Push in top of sear retractor until it clicks into position. Turn drive shaft counterclockwise. Look at bolt and carrier as it moves forward. Does firing pin pawl hold firing pin tang and compress firing pin spring?

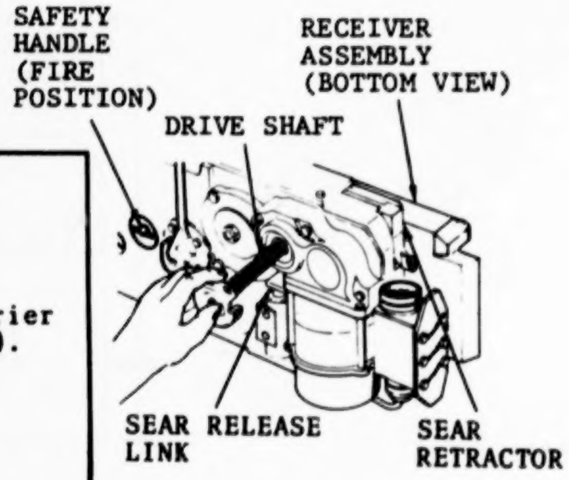
NO → Repair bolt and carrier assembly (para 2-60).

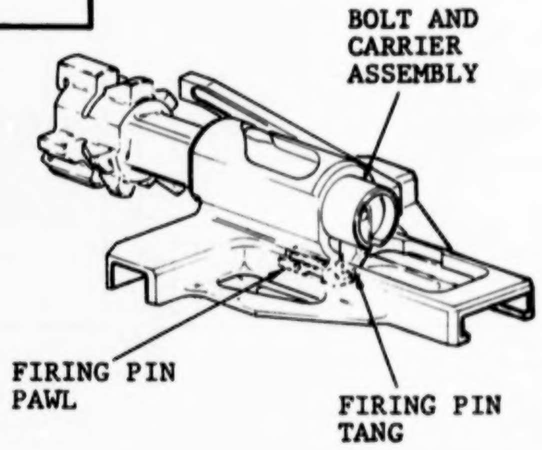
YES ↓

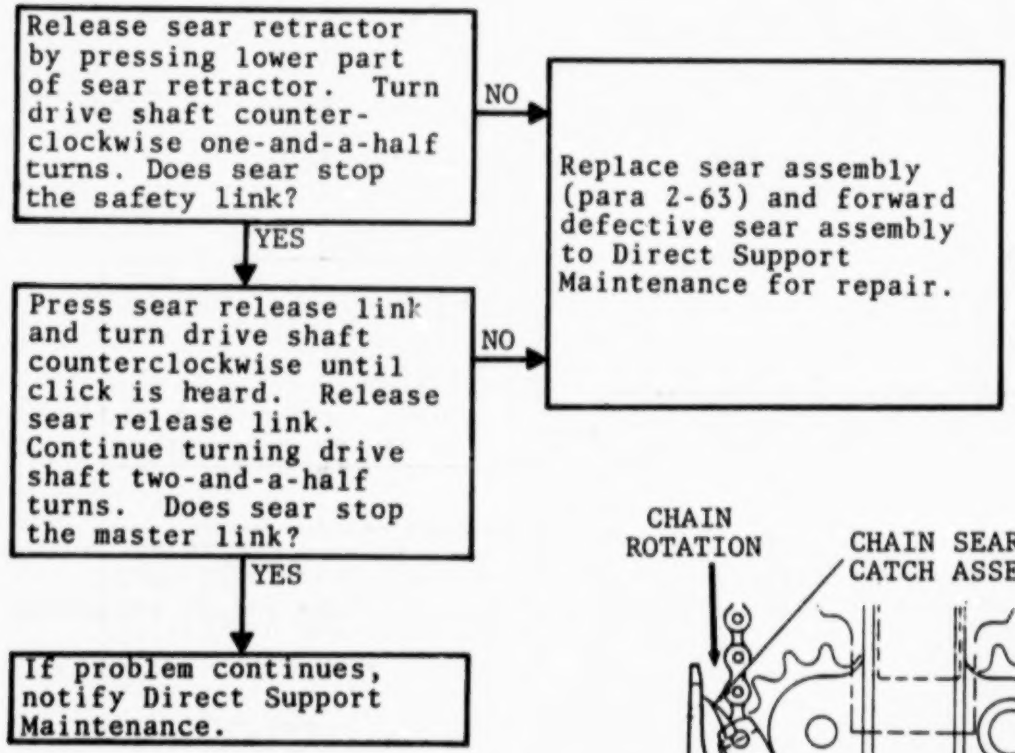
Turn safety handle to fire position. Turn drive shaft counterclockwise. Does firing pin tang snap off firing pin pawl when bolt locks into breech?

NO → Repair bolt and carrier assembly (para 2-60).

YES ↓


SAFETY HANDLE (FIRE POSITION)
RECEIVER ASSEMBLY (BOTTOM VIEW)
DRIVE SHAFT
SEAR RELEASE LINK
SEAR RETRACTOR


BOLT AND CARRIER ASSEMBLY
FIRING PIN PAWL
FIRING PIN TANG

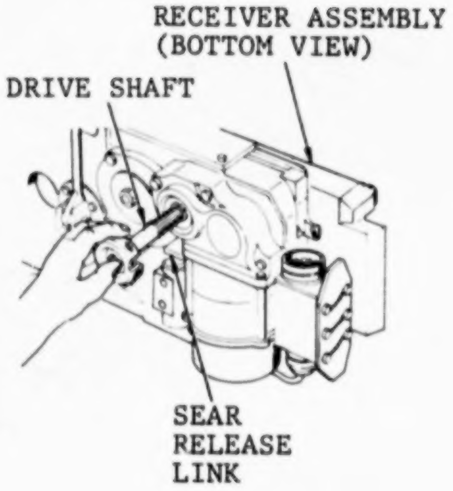

NO
YES
NO
YES

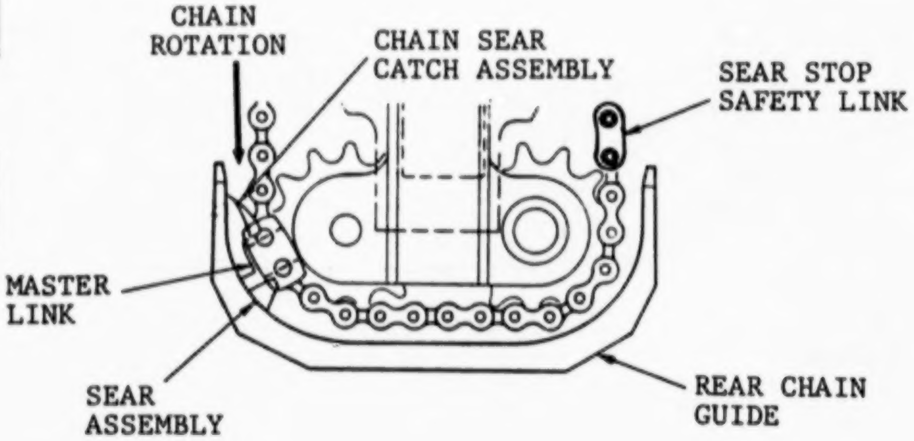
Release sear retractor by pressing lower part of sear retractor. Turn drive shaft counterclockwise one-and-a-half turns. Does sear stop the safety link?

Press sear release link and turn drive shaft counterclockwise until click is heard. Release sear release link. Continue turning drive shaft two-and-a-half turns. Does sear stop the master link?

If problem continues, notify Direct Support Maintenance.

Replace sear assembly (para 2-63) and forward defective sear assembly to Direct Support Maintenance for repair.


RECEIVER ASSEMBLY
(BOTTOM VIEW)
DRIVE SHAFT
SEAR
RELEASE
LINK


CHAIN
ROTATION
CHAIN SEAR
CATCH ASSEMBLY
SEAR STOP
SAFETY LINK
MASTER
LINK
SEAR
ASSEMBLY
REAR CHAIN
GUIDE

2-11. GUN FIRES AT REDUCED RATE

INITIAL SETUP

Applicable Configurations

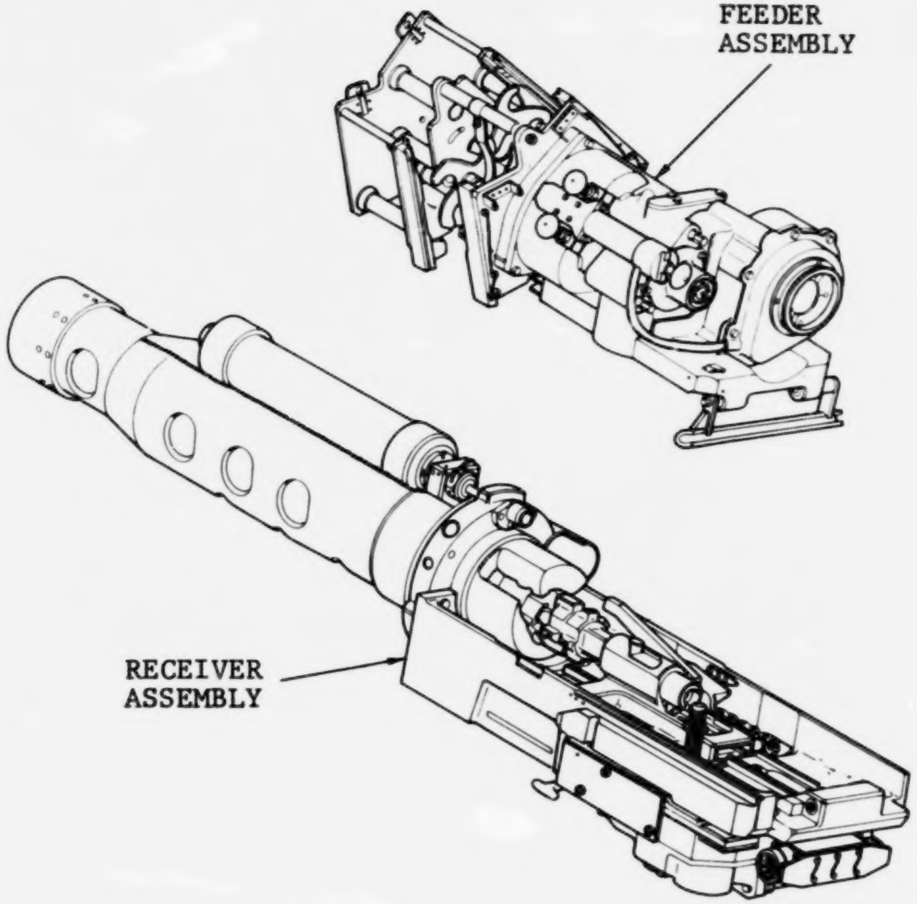
All

Personnel Required

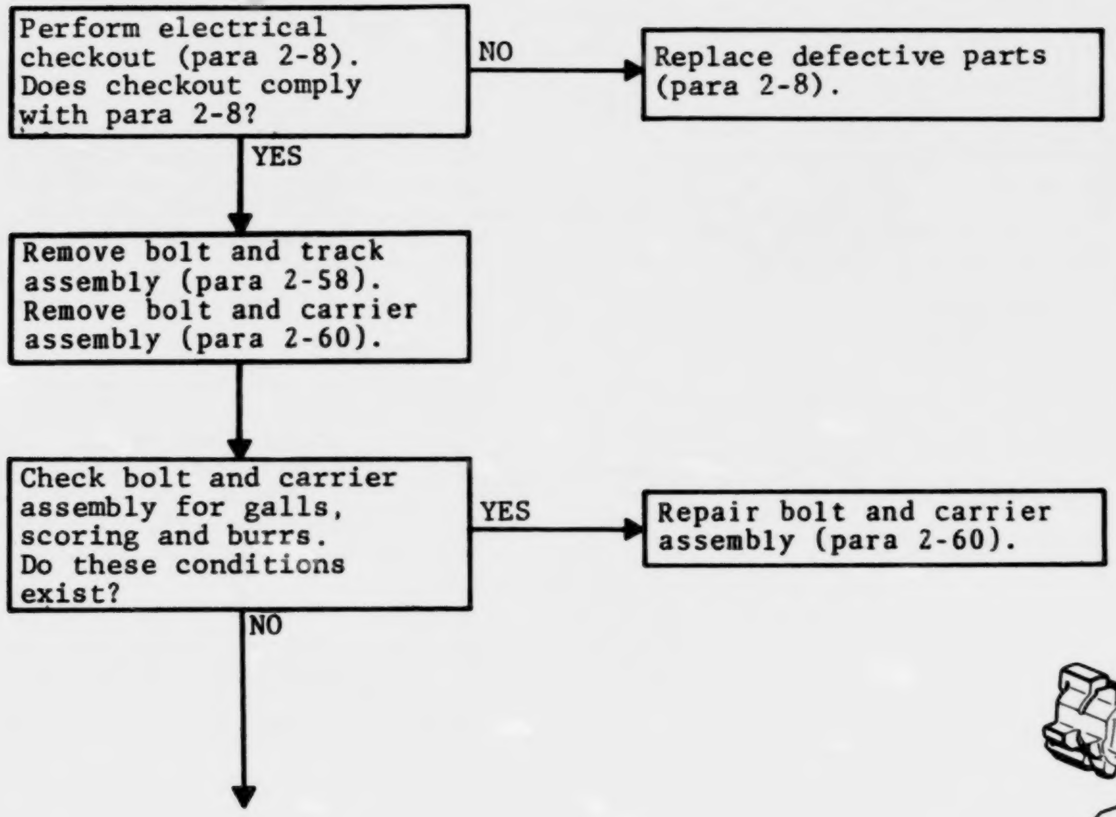
45T Turret Mechanic

Equipment Conditions

Feeder assembly removed from gun
(para 2-27)


FEEDER ASSEMBLY
RECEIVER ASSEMBLY

2-11. GUN FIRES AT REDUCED RATE (cont)



Perform electrical checkout (para 2-8). Does checkout comply with para 2-8?

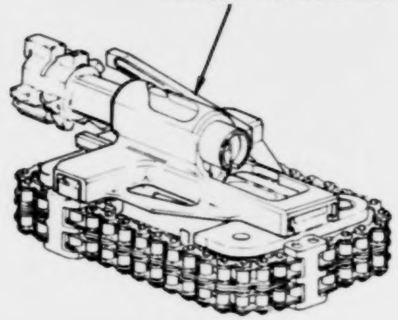
NO: Replace defective parts (para 2-8).

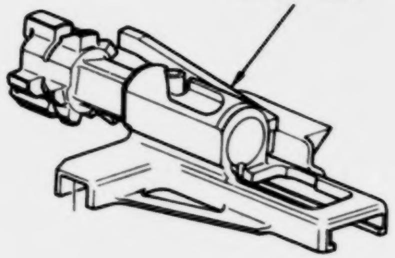
YES: Remove bolt and track assembly (para 2-58). Remove bolt and carrier assembly (para 2-60).

Check bolt and carrier assembly for galls, scoring and burrs. Do these conditions exist?

YES: Repair bolt and carrier assembly (para 2-60).

NO

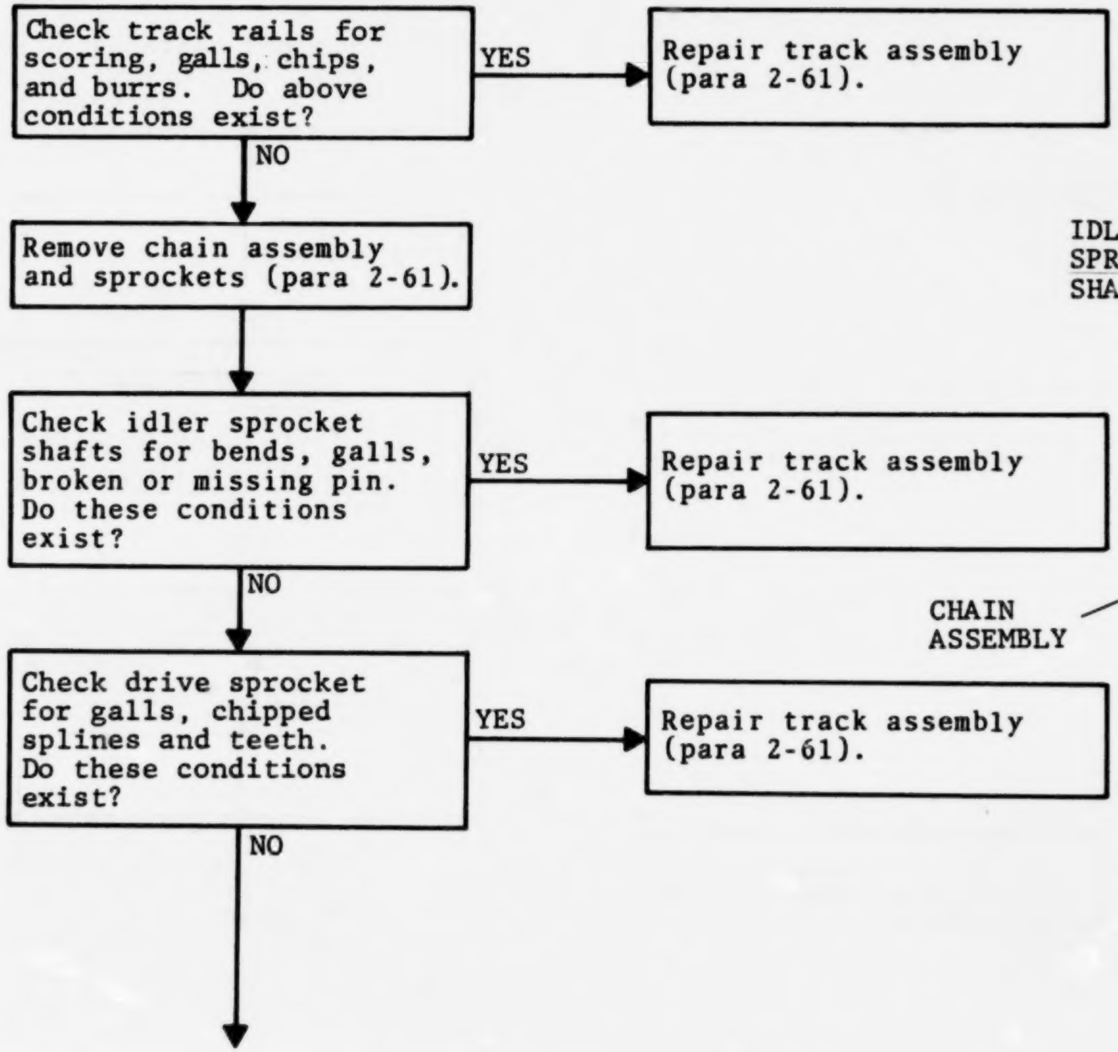

BOLT AND TRACK ASSEMBLY


BOLT AND CARRIER ASSEMBLY

TROUBLESHOOTING (cont)

2-11. GUN FIRES AT REDUCED RATE (cont)

2-11



Check track rails for scoring, galls, chips, and burrs. Do above conditions exist?

YES → Repair track assembly (para 2-61).

NO ↓

Remove chain assembly and sprockets (para 2-61).

↓

Check idler sprocket shafts for bends, galls, broken or missing pin. Do these conditions exist?

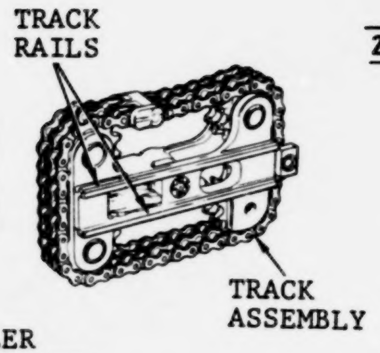
YES → Repair track assembly (para 2-61).

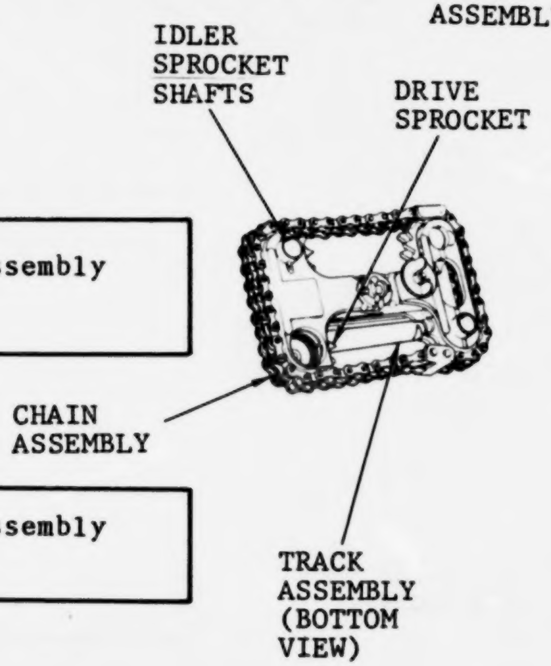
NO ↓

Check drive sprocket for galls, chipped splines and teeth. Do these conditions exist?

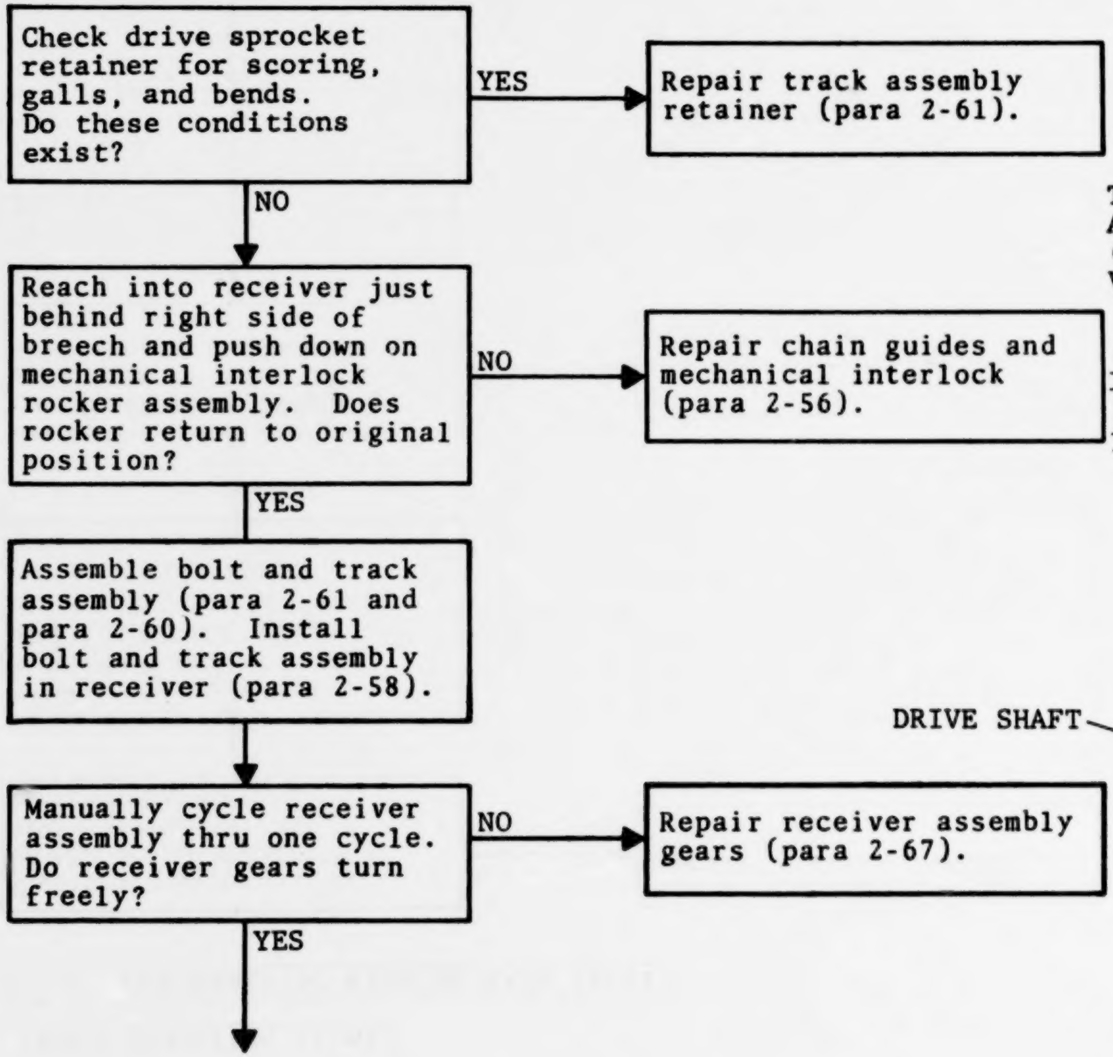
YES → Repair track assembly (para 2-61).

NO ↓


TRACK RAILS
TRACK ASSEMBLY


IDLER SPROCKET SHAFTS
DRIVE SPROCKET
CHAIN ASSEMBLY
TRACK ASSEMBLY (BOTTOM VIEW)

2-11. GUN FIRES AT REDUCED RATE (cont)



Check drive sprocket retainer for scoring, galls, and bends. Do these conditions exist?

YES → Repair track assembly retainer (para 2-61).

NO ↓

Reach into receiver just behind right side of breech and push down on mechanical interlock rocker assembly. Does rocker return to original position?

NO → Repair chain guides and mechanical interlock (para 2-56).

YES ↓

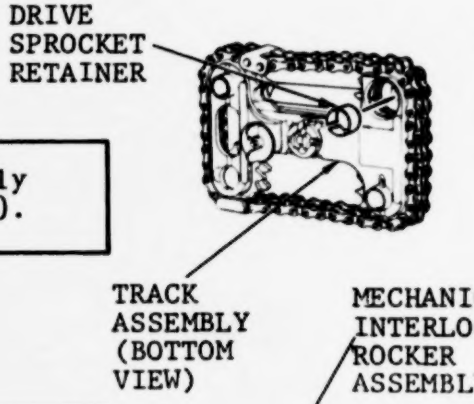
Assemble bolt and track assembly (para 2-61 and para 2-60). Install bolt and track assembly in receiver (para 2-58).

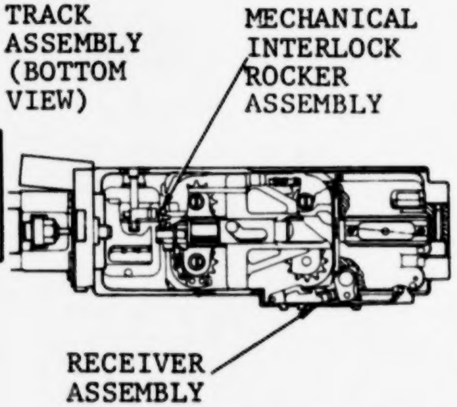
↓

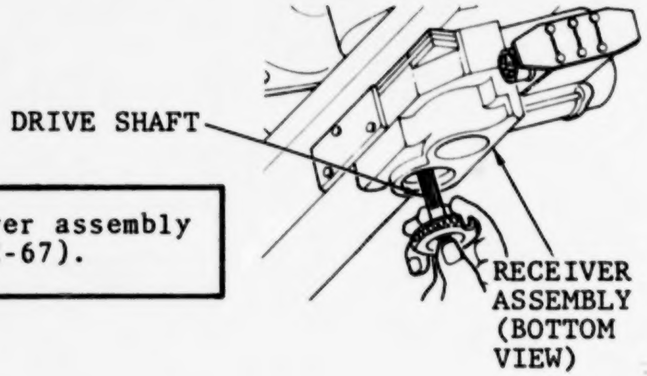
Manually cycle receiver assembly thru one cycle. Do receiver gears turn freely?

NO → Repair receiver assembly gears (para 2-67).

YES ↓


DRIVE SPROCKET RETAINER
TRACK ASSEMBLY (BOTTOM VIEW)


MECHANICAL INTERLOCK ROCKER ASSEMBLY
RECEIVER ASSEMBLY


DRIVE SHAFT
RECEIVER ASSEMBLY (BOTTOM VIEW)

TROUBLESHOOTING (cont)

2-11. GUN FIRES AT REDUCED RATE (cont)

Perform feeder manual cycle check (para 2-9). Does feeder bind?

NO → Install feeder assembly (para 2-27).

YES ↓

Remove forward feed assembly (para 2-42) and check bushings for galls and bends. Do these conditions exist?

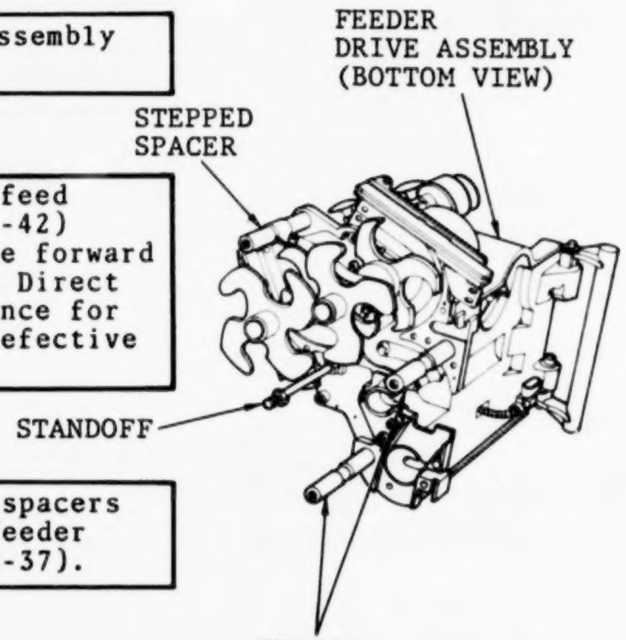
YES → Replace forward feed assembly (para 2-42) forward defective forward feed assembly to Direct Support Maintenance for replacement of defective bushings.

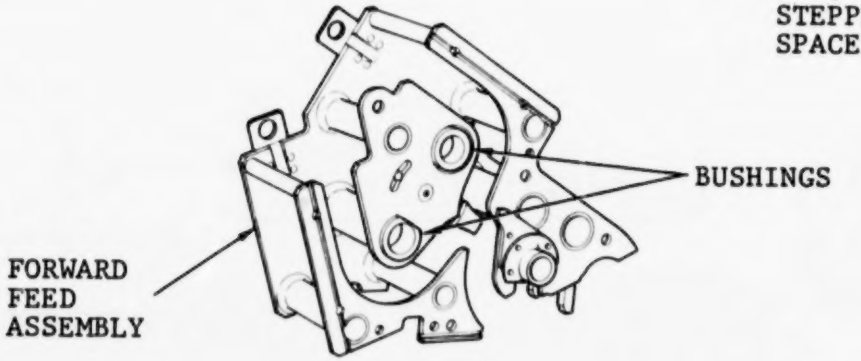
NO ↓

Check stepped spacers and standoff for bends. Does this condition exist?

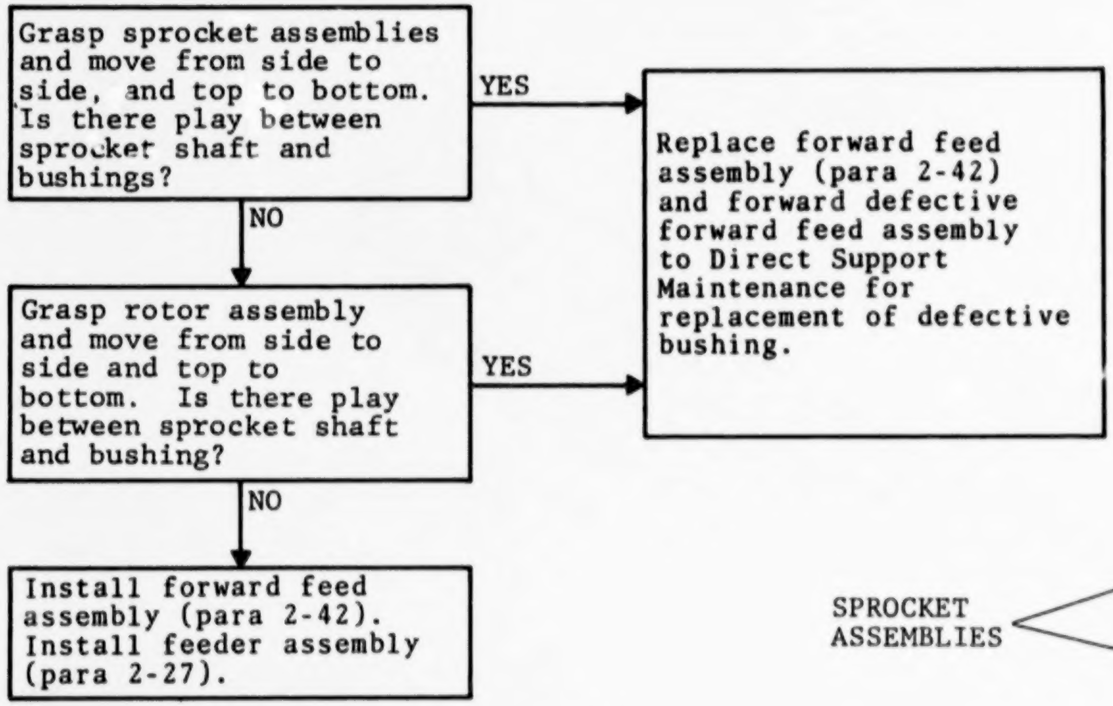
YES → Replace stepped spacers (para 2-38) or feeder standoff (para 2-37).

NO ↓


FEEDER
DRIVE ASSEMBLY
(BOTTOM VIEW)
STEPPED
SPACER
STANDOFF
STEPPED
SPACERS


BUSHINGS
FORWARD
FEED
ASSEMBLY

2-11. GUN FIRES AT REDUCED RATE (cont)



Grasp sprocket assemblies and move from side to side, and top to bottom. Is there play between sprocket shaft and bushings?

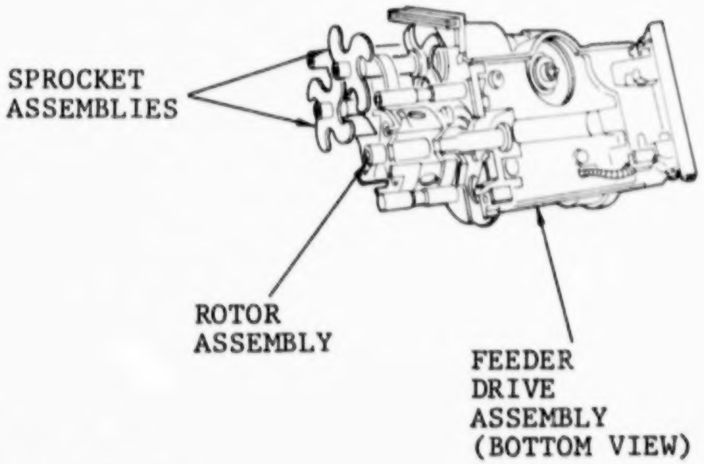
YES
NO

Grasp rotor assembly and move from side to side and top to bottom. Is there play between sprocket shaft and bushing?

YES
NO

Replace forward feed assembly (para 2-42) and forward defective forward feed assembly to Direct Support Maintenance for replacement of defective bushing.

Install forward feed assembly (para 2-42). Install feeder assembly (para 2-27).



SPROCKET ASSEMBLIES
ROTOR ASSEMBLY
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)

TROUBLESHOOTING (cont)

2-12. GUN WILL NOT FIRE

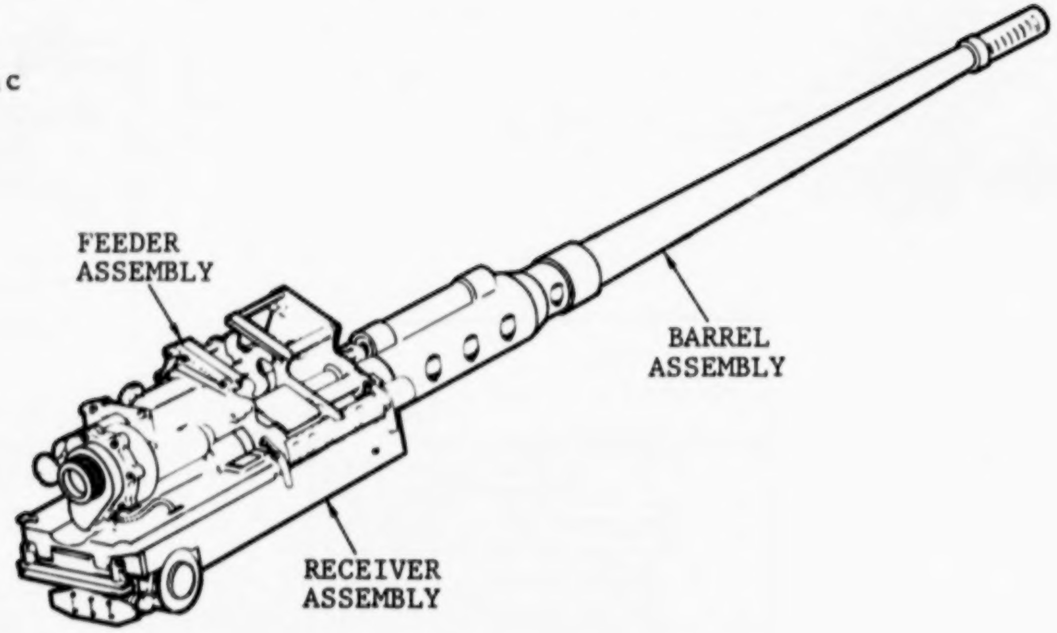
INITIAL SETUP

Applicable Configurations

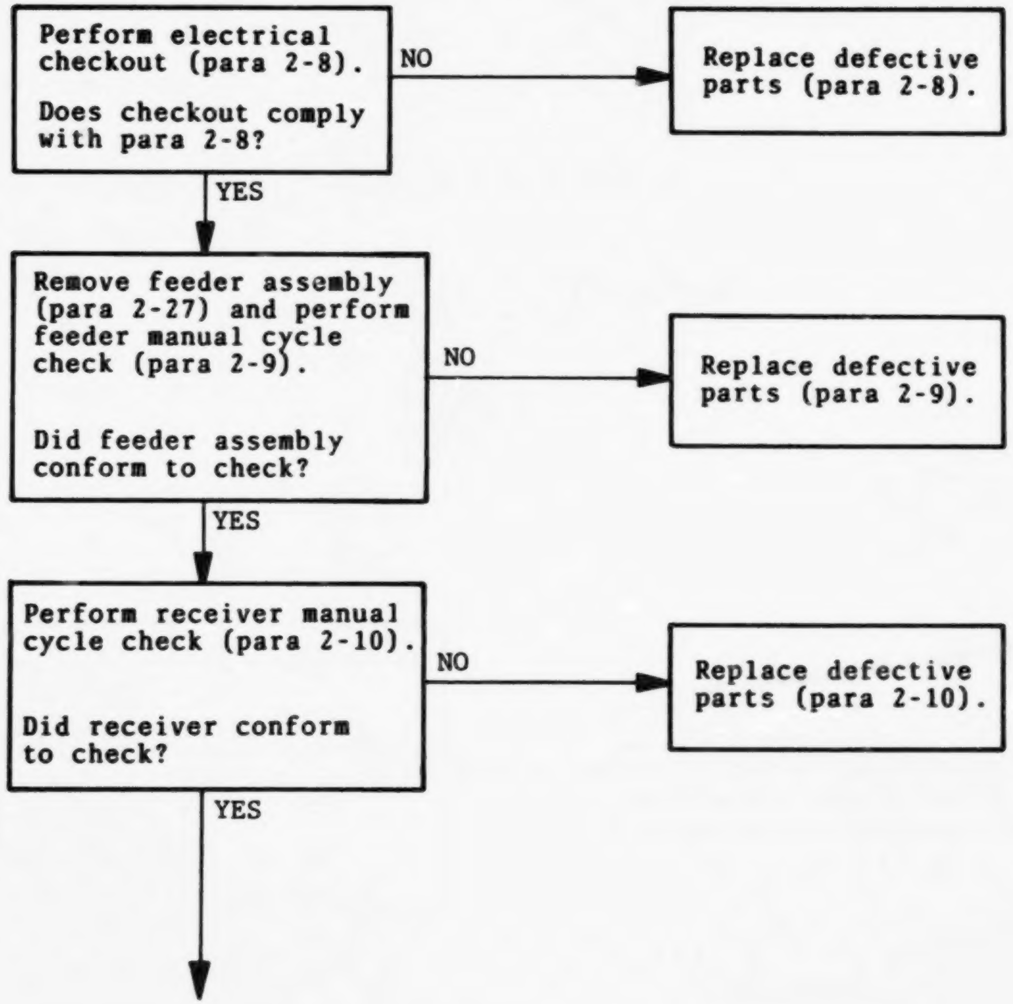
All

Personnel Required

45T Turret Mechanic


FEEDER ASSEMBLY
BARREL ASSEMBLY
RECEIVER ASSEMBLY

2-12. GUN WILL NOT FIRE



Perform electrical checkout (para 2-8).

Does checkout comply with para 2-8?

Replace defective parts (para 2-8).

Remove feeder assembly (para 2-27) and perform feeder manual cycle check (para 2-9).

Did feeder assembly conform to check?

Replace defective parts (para 2-9).

Perform receiver manual cycle check (para 2-10).

Did receiver conform to check?

Replace defective parts (para 2-10).

2-12. GUN WILL NOT FIRE (cont)

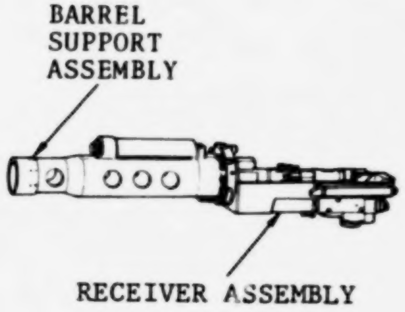
Remove bolt and carrier assembly (para 2-58). Disassemble bolt and carrier (para 2-60) and check all parts for galls, breaks, bends and wear.

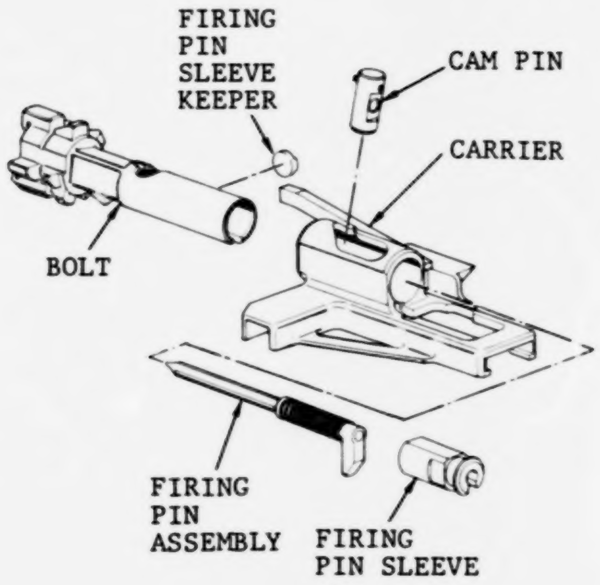
Do these conditions exist?

YES

Repair bolt and carrier by replacing defective parts (para 2-60).

NO


BARREL SUPPORT ASSEMBLY
RECEIVER ASSEMBLY


FIRING PIN SLEEVE KEEPER
CAM PIN
CARRIER
BOLT
FIRING PIN ASSEMBLY
FIRING PIN SLEEVE

2-12. GUN WILL NOT FIRE (cont)

Remove chain assembly and sprockets (para 2-61) and check track, idler sprocket shafts, and sprockets for breaks, bends, broken teeth, and deep galls, or high burrs.

Do these conditions exist?

YES → Repair track assembly by replacing defective parts (para 2-61).

NO ↓

Check chain assembly for jammed, broken or loose links, galled or scored slider.

Do these conditions exist?

YES → Repair track assembly by replacing chain assembly (para 2-61).

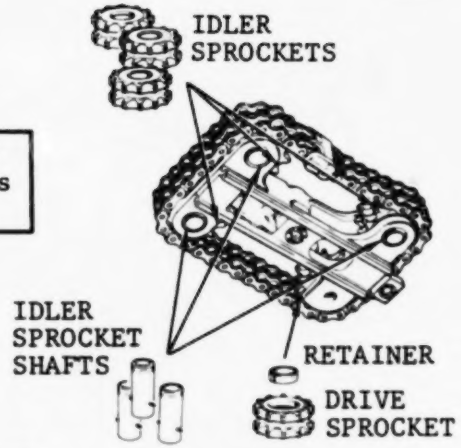
NO ↓

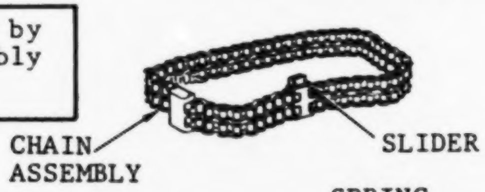
Check clevis assembly for broken or missing spring washers.

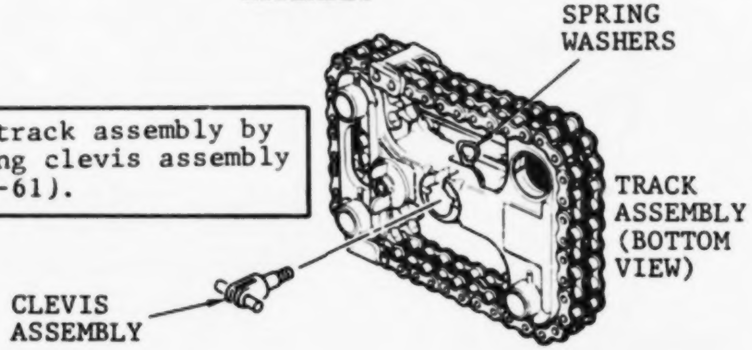
Do these conditions exist?

YES → Repair track assembly by replacing clevis assembly (para 2-61).

NO ↓


IDLER SPROCKETS
IDLER SPROCKET SHAFTS
RETAINER
DRIVE SPROCKET


CHAIN ASSEMBLY
SLIDER


SPRING WASHERS
TRACK ASSEMBLY (BOTTOM VIEW)
CLEVIS ASSEMBLY

Check latch-track hook and pivot latch for breaks, bends and wear.

Do these conditions exist?

YES → Replace latch-track hook if defective (para 2-50) or pivot latch (para 2-55).

NO ↓

Check rear track for breaks or bends. Check cap screws and receiver screw thread inserts for stripped threads.

Do these conditions exist?

YES → Replace rear track (para 2-52). If screw thread inserts are damaged, replace gun (para 2-5) and forward to Direct Support Maintenance for replacement of screw thread inserts (para 2-5).

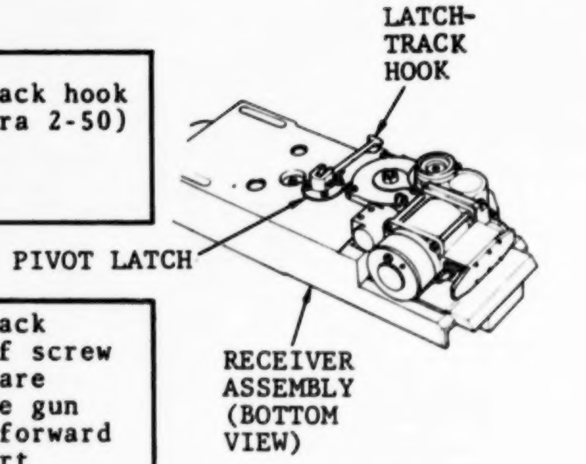
NO ↓

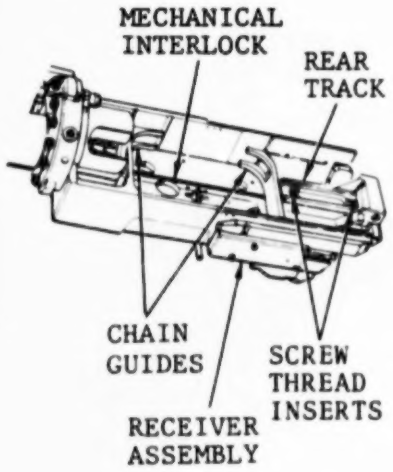
Check chain guides for high burrs, bends and breaks.

Do these conditions exist?

YES → Repair chain guide(s) and mechanical interlock by replacing defective guide(s) (para 2-56).

NO ↓


LATCH-TRACK HOOK
PIVOT LATCH
RECEIVER ASSEMBLY (BOTTOM VIEW)


MECHANICAL INTERLOCK
REAR TRACK
CHAIN GUIDES
SCREW THREAD INSERTS
RECEIVER ASSEMBLY

TROUBLESHOOTING (cont)

2-12. GUN WILL NOT FIRE (cont)

Remove rear chain guide (para 2-56) and check mechanical interlock chain sear push rod for bends and jams.

Do these conditions exist?

YES

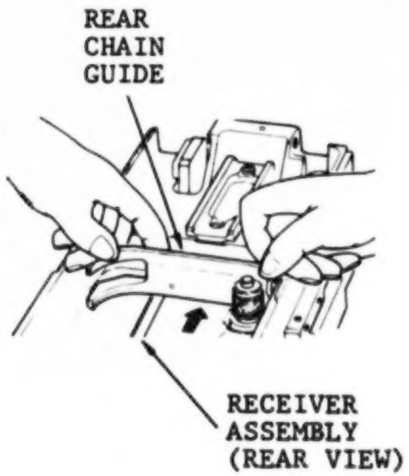
Repair chain guide(s) and mechanical interlock by replacing sear push rod (para 2-56).

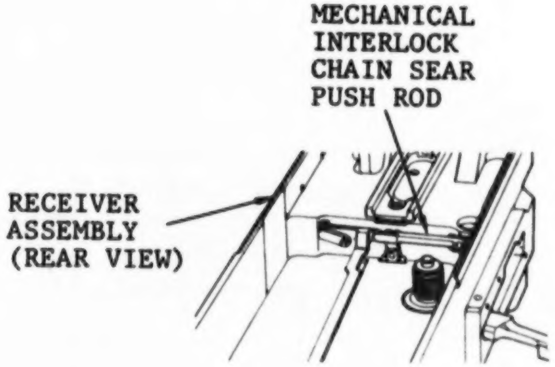
NO

Install mechanical interlock parts and rear chain guide (para 2-56). Install track assembly parts (para 2-57). Install bolt and carrier assembly (para 2-60). Install bolt and track assembly (para 2-58).

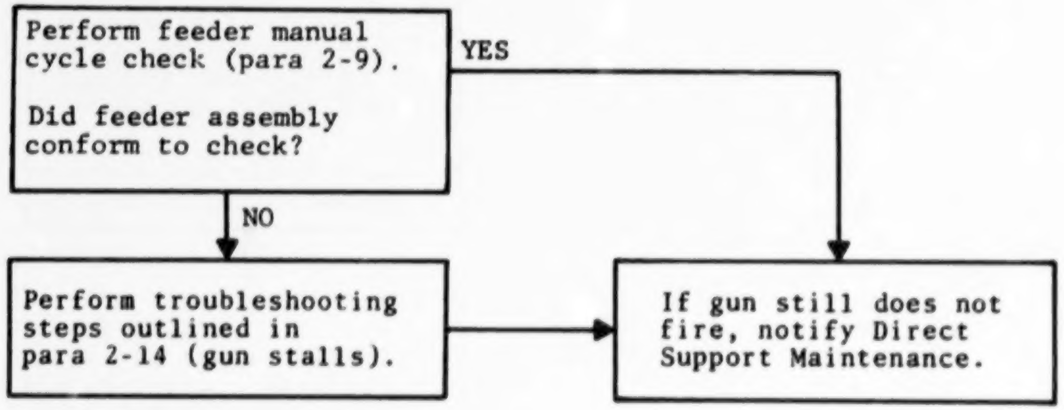
Perform receiver manual cycle check (para 2-10).

If receiver binds and will not cycle/fire, notify Direct Support Maintenance.


REAR CHAIN GUIDE
RECEIVER ASSEMBLY (REAR VIEW)


MECHANICAL INTERLOCK CHAIN SEAR PUSH ROD
RECEIVER ASSEMBLY (REAR VIEW)

2-12. GUN WILL NOT FIRE (cont)



Perform feeder manual cycle check (para 2-9).

Did feeder assembly conform to check?

Perform troubleshooting steps outlined in para 2-14 (gun stalls).

If gun still does not fire, notify Direct Support Maintenance.

TROUBLESHOOTING (cont)

2-13. GUN WILL NOT STOP IN SEAR POSITION

2-13

INITIAL SETUP

Applicable Configurations

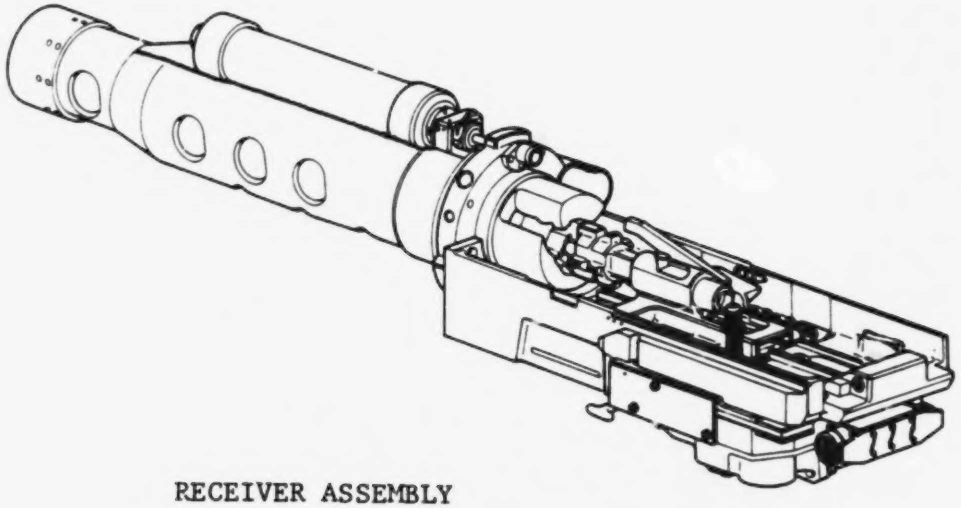
All

Tools/Test and Support Equipment

Turret Mechanic's Tool Kit
SC 5180-95CLB19
(Item 1, App B)

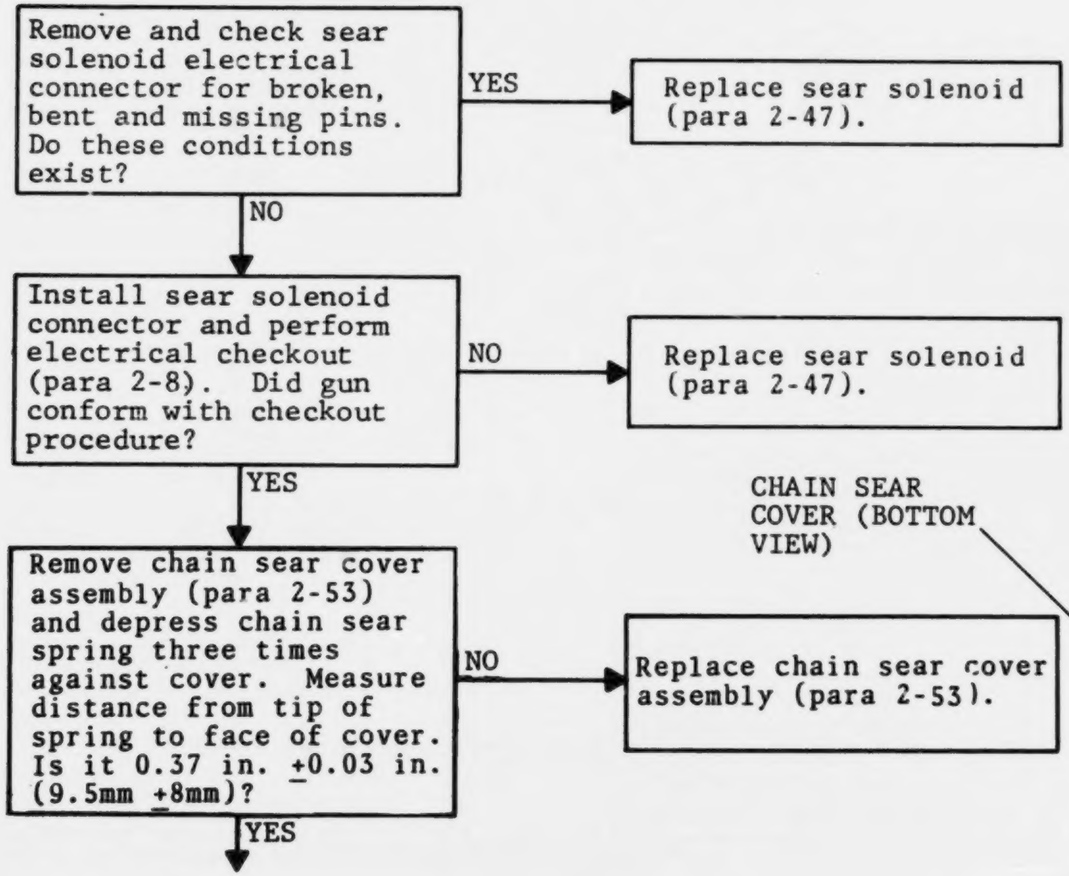
Personnel Required

45T Turret Mechanic



RECEIVER ASSEMBLY

2-13. GUN WILL NOT STOP IN SEAR POSITION (cont)



Remove and check sear solenoid electrical connector for broken, bent and missing pins. Do these conditions exist?

YES → Replace sear solenoid (para 2-47).

NO ↓

Install sear solenoid connector and perform electrical checkout (para 2-8). Did gun conform with checkout procedure?

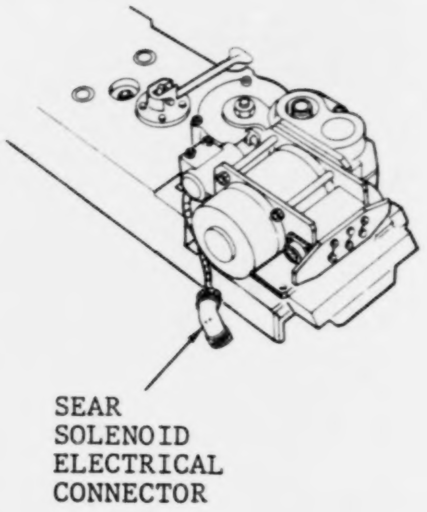
NO → Replace sear solenoid (para 2-47).

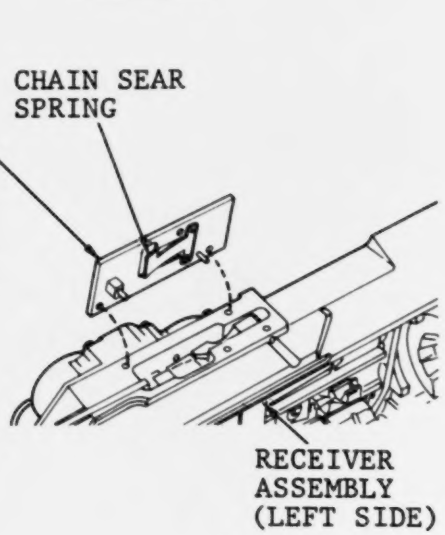
YES ↓

Remove chain sear cover assembly (para 2-53) and depress chain sear spring three times against cover. Measure distance from tip of spring to face of cover. Is it 0.37 in. ±0.03 in. (9.5mm ±8mm)?

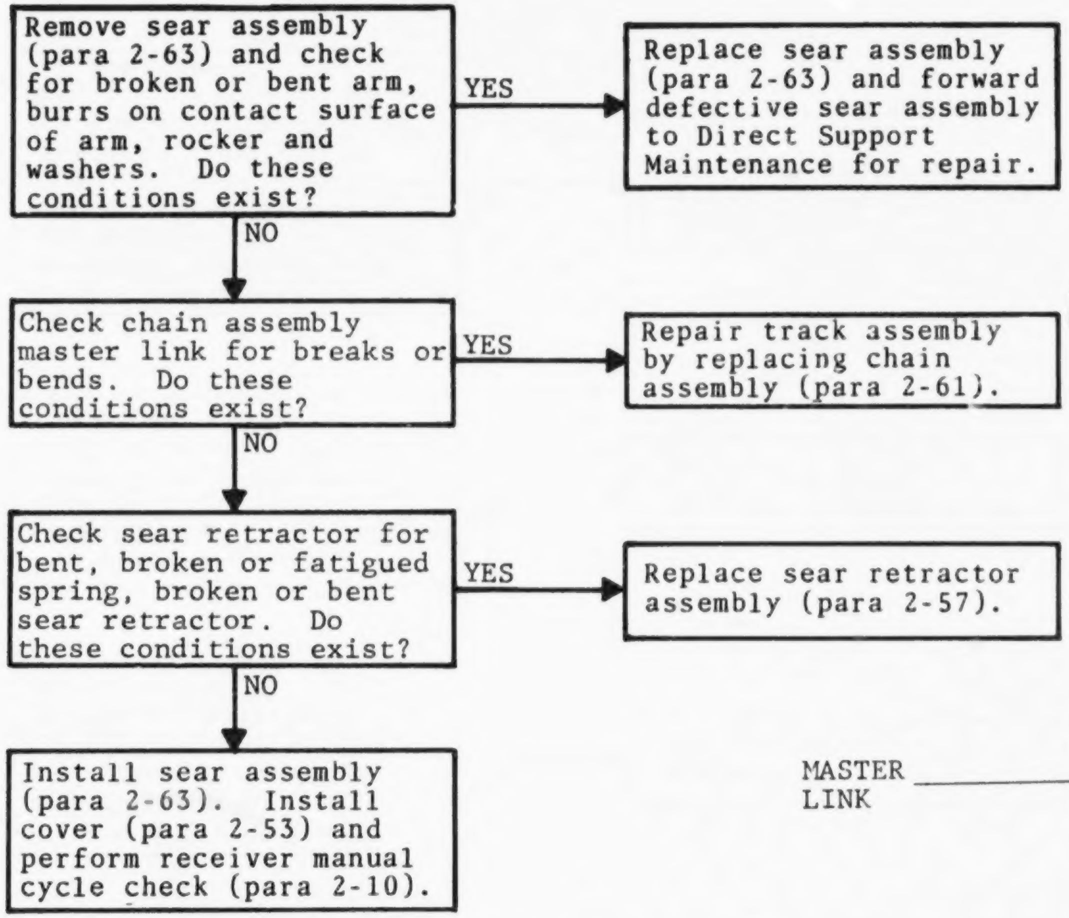
NO → Replace chain sear cover assembly (para 2-53).

YES ↓


SEAR SOLENOID ELECTRICAL CONNECTOR


CHAIN SEAR COVER (BOTTOM VIEW)
CHAIN SEAR SPRING
RECEIVER ASSEMBLY (LEFT SIDE)

2-13. GUN WILL NOT STOP IN SEAR POSITION (cont)



Remove sear assembly (para 2-63) and check for broken or bent arm, burrs on contact surface of arm, rocker and washers. Do these conditions exist?

YES: Replace sear assembly (para 2-63) and forward defective sear assembly to Direct Support Maintenance for repair.

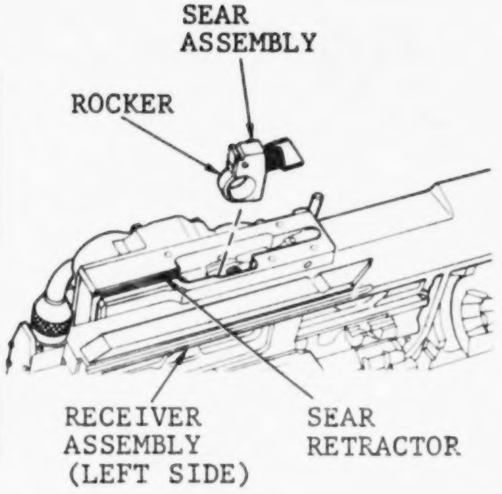
NO: Check chain assembly master link for breaks or bends. Do these conditions exist?

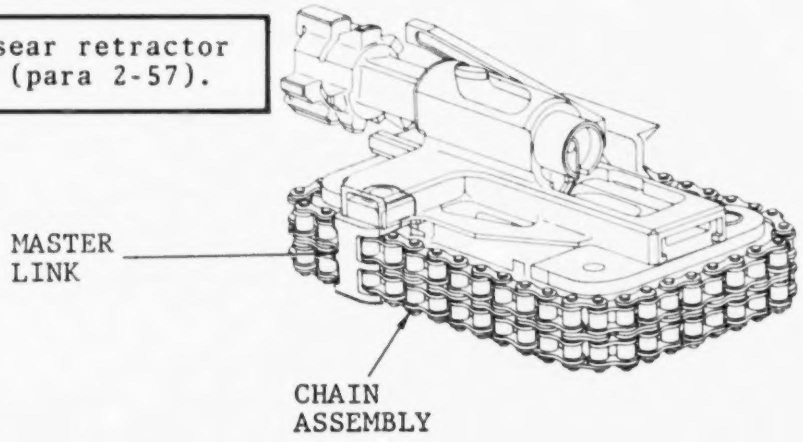
YES: Repair track assembly by replacing chain assembly (para 2-61).

NO: Check sear retractor for bent, broken or fatigued spring, broken or bent sear retractor. Do these conditions exist?

YES: Replace sear retractor assembly (para 2-57).

NO: Install sear assembly (para 2-63). Install cover (para 2-53) and perform receiver manual cycle check (para 2-10).


SEAR ASSEMBLY
ROCKER
RECEIVER ASSEMBLY (LEFT SIDE)
SEAR RETRACTOR


MASTER LINK
CHAIN ASSEMBLY

TROUBLESHOOTING (cont)

2-14. GUN STALLS

INITIAL SETUP

Applicable Configurations

All

Tools/Test and Support Equipment

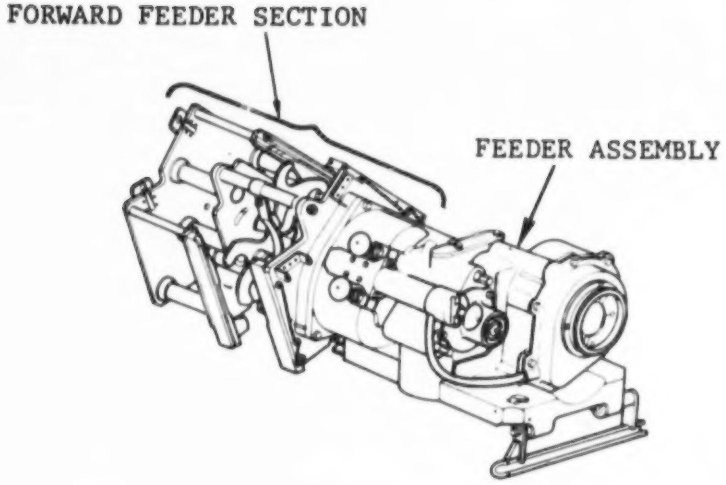
Turret Mechanic's Tool Kit
SC 5180-95CLB19
(Item 1, App B)
Dummy Cartridge With Link
9341746
(Item 3, App B)

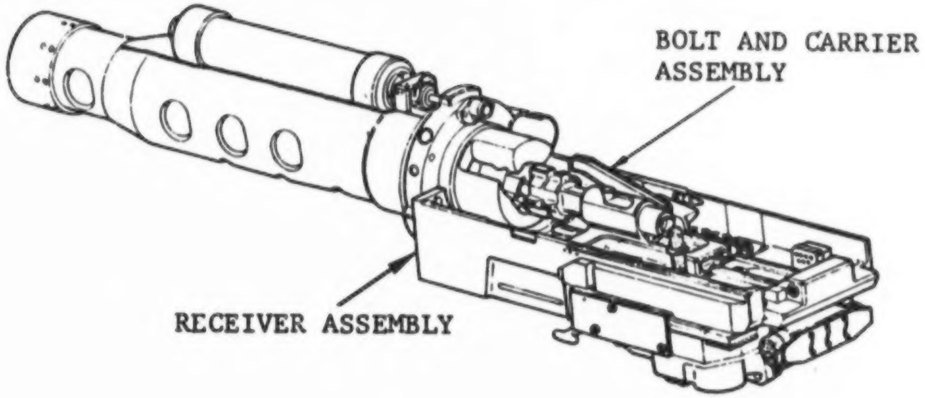
Personnel Required

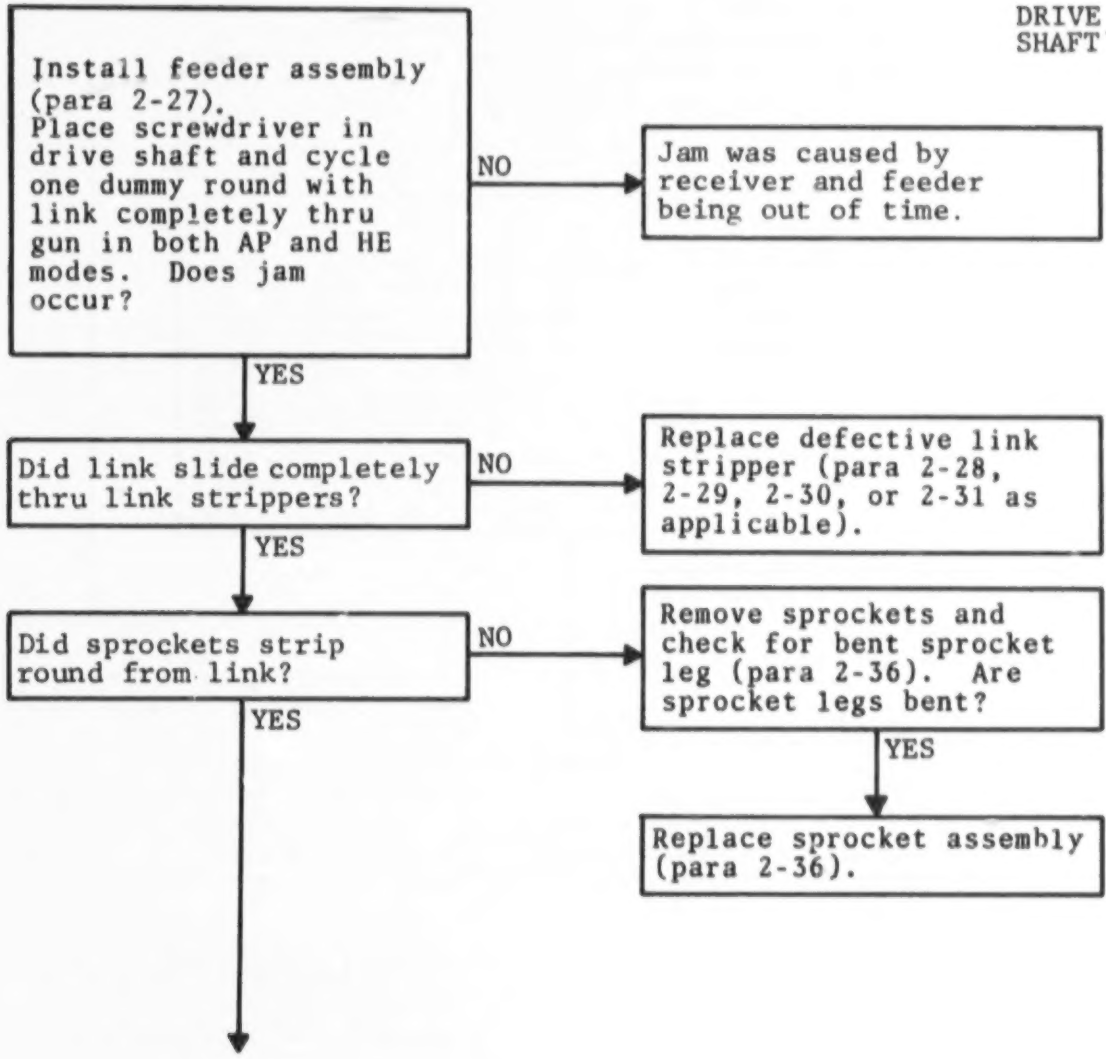
45T Turret Mechanic

Equipment Conditions

Feeder manual cycle check completed
(para 2-9)


FORWARD FEEDER SECTION
FEEDER ASSEMBLY


BOLT AND CARRIER ASSEMBLY
RECEIVER ASSEMBLY



Install feeder assembly (para 2-27). Place screwdriver in drive shaft and cycle one dummy round with link completely thru gun in both AP and HE modes. Does jam occur?

NO: Jam was caused by receiver and feeder being out of time.

YES

Did link slide completely thru link strippers?

NO: Replace defective link stripper (para 2-28, 2-29, 2-30, or 2-31 as applicable).

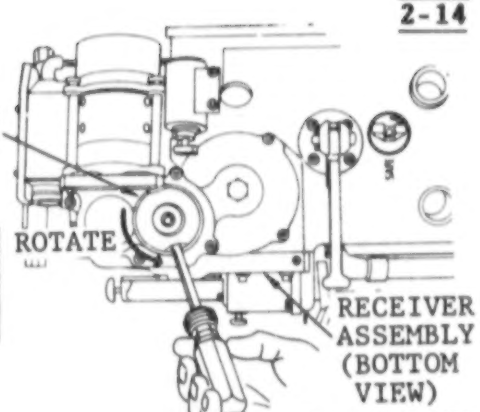
YES

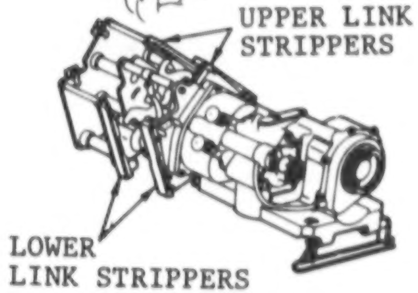
Did sprockets strip round from link?

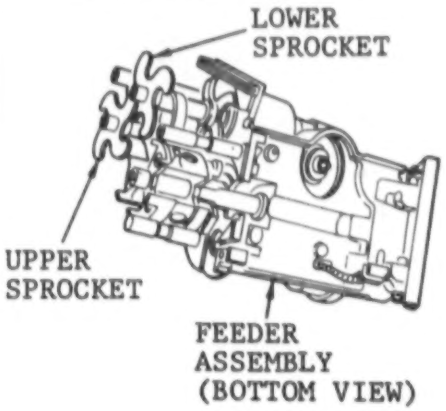
NO: Remove sprockets and check for bent sprocket leg (para 2-36). Are sprocket legs bent?

YES: Replace sprocket assembly (para 2-36).

YES

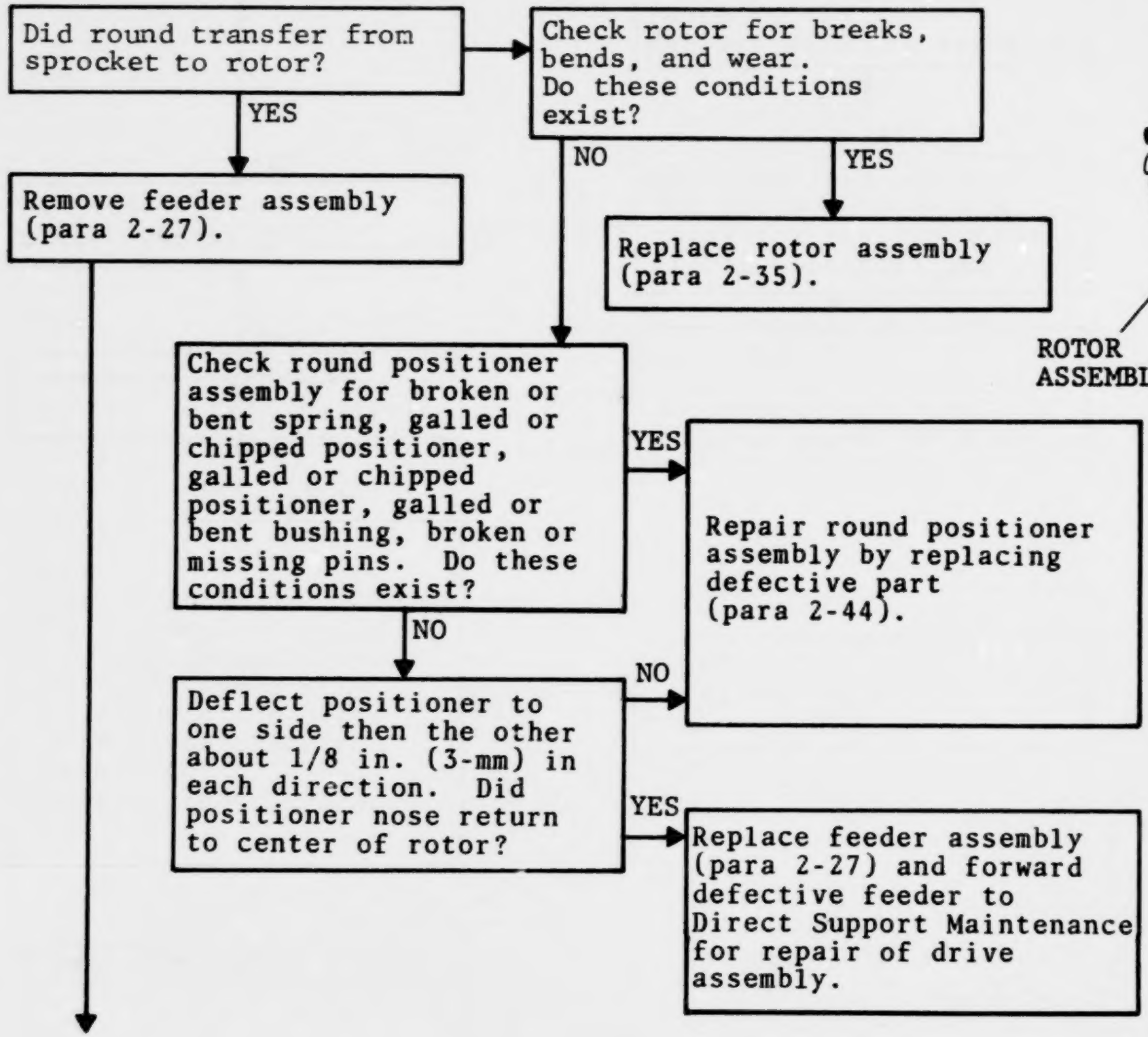

DRIVE SHAFT
ROTATE
RECEIVER ASSEMBLY (BOTTOM VIEW)


UPPER LINK STRIPPERS
LOWER LINK STRIPPERS


LOWER SPROCKET
UPPER SPROCKET
FEEDER ASSEMBLY (BOTTOM VIEW)

TROUBLESHOOTING (cont)

2-14. GUN STALLS (cont)



Did round transfer from sprocket to rotor?

Remove feeder assembly (para 2-27).

Check rotor for breaks, bends, and wear. Do these conditions exist?

Replace rotor assembly (para 2-35).

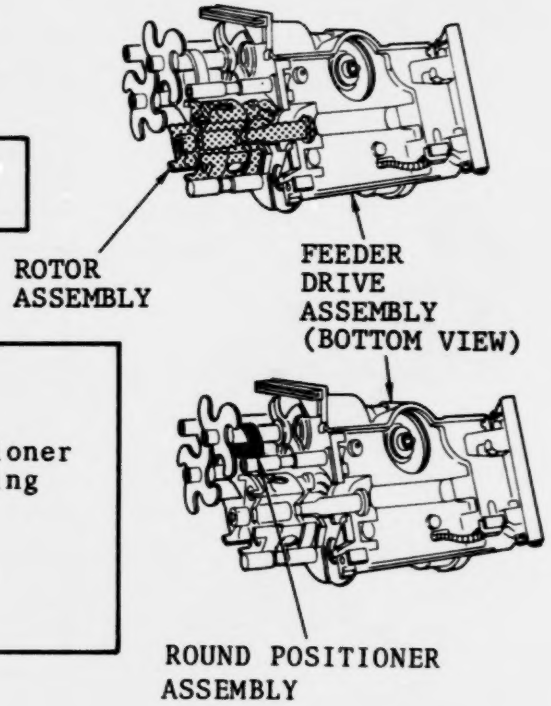
Check round positioner assembly for broken or bent spring, galled or chipped positioner, galled or chipped positioner, galled or bent bushing, broken or missing pins. Do these conditions exist?

Repair round positioner assembly by replacing defective part (para 2-44).

Deflect positioner to one side then the other about 1/8 in. (3-mm) in each direction. Did positioner nose return to center of rotor?

Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair of drive assembly.

YES
NO
YES
YES
NO
NO
YES



ROTOR ASSEMBLY
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)
ROUND POSITIONER ASSEMBLY

best copy available

Check forward feeder gate for binding or bent or broken gate, fatigued or bent spring. Do these conditions exist?

YES → Replace forward feeder gate and/or defective parts (para 2-33).

NO ↓

Check rear feeder gate assembly for binding or broken gate, weak or broken spring. Do these conditions exist?

YES → Replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair of rear feed plate.

NO ↓

Check cartridge guide for breaks and bends. Do these conditions exist?

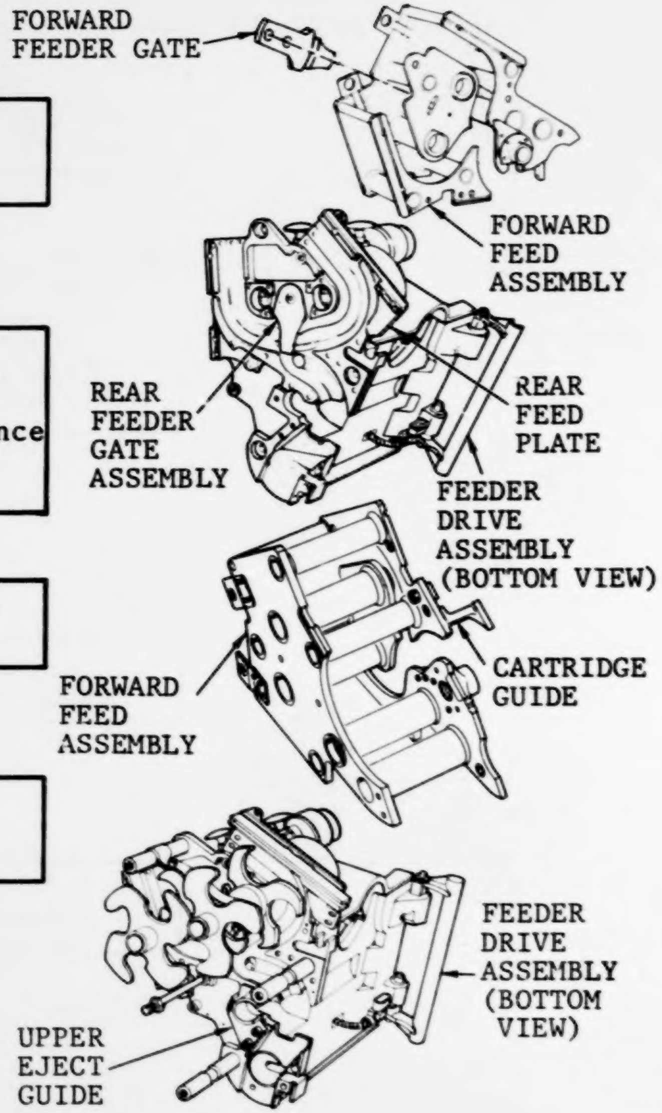
YES → Replace cartridge guide (para 2-34).

NO ↓

Did upper eject guide control and guide rear of cartridge?

NO → Replace upper eject guide (para 2-39).

YES ↓


FORWARD FEEDER GATE
FORWARD FEED ASSEMBLY
REAR FEEDER GATE ASSEMBLY
REAR FEED PLATE
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)
CARTRIDGE GUIDE
FORWARD FEED ASSEMBLY
FEEDER DRIVE ASSEMBLY (BOTTOM VIEW)
UPPER EJECT GUIDE

2-14. GUN STALLS (cont)

Check link shield for bends and cracks. Do these conditions exist?

YES → Replace link shield (para 2-40).

NO ↓

Check ejection chute assembly for cracks, bends, deep dents and breaks. Do these conditions exist?

YES → Replace ejection chute assembly (para 2-32).

NO ↓

Remove bolt and carrier assembly (para 2-59). Check carrier for galls and bends. Do these conditions exist?

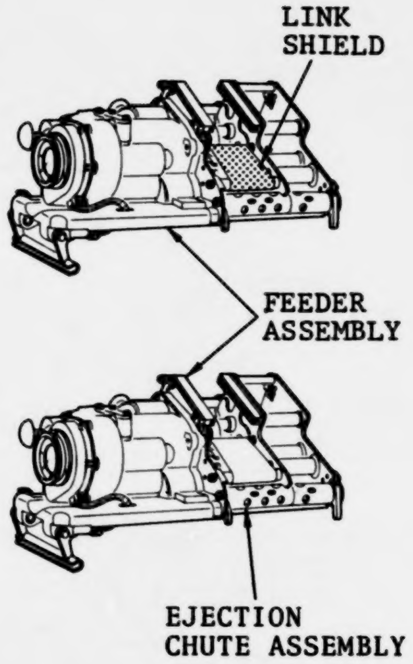
YES → Repair bolt and carrier assembly by replacing carrier (para 2-60).

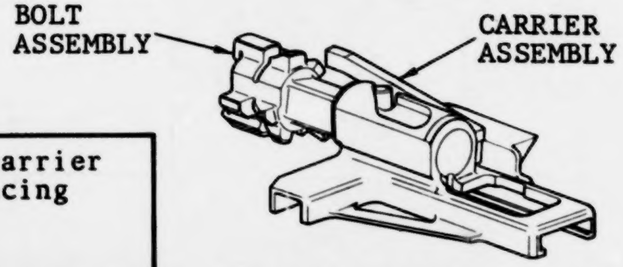
NO ↓

Check bolt for galls, bends, and wear on bolt lugs and extractor lips. Do these conditions exist?

YES → Repair bolt and carrier assembly by replacing defective parts (para 2-60).

NO ↓


LINK SHIELD
FEEDER ASSEMBLY
EJECTION CHUTE ASSEMBLY


BOLT ASSEMBLY
CARRIER ASSEMBLY

BOLT AND CARRIER ASSEMBLY

2-14. GUN STALLS (cont)

Disassemble bolt and carrier assembly (para 2-60) and check detail parts for breaks, galls, and wear. Do these conditions exist?

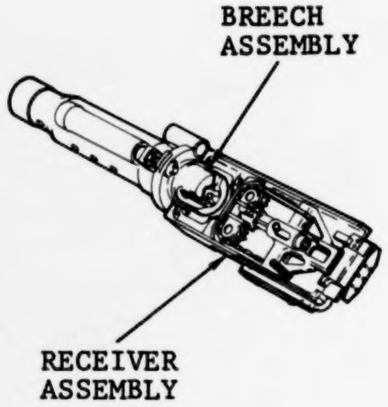
Repair bolt and carrier assembly by replacing defective parts (para 2-60).

Check breech locking lugs for galls, burrs, and wear. Do these conditions exist?

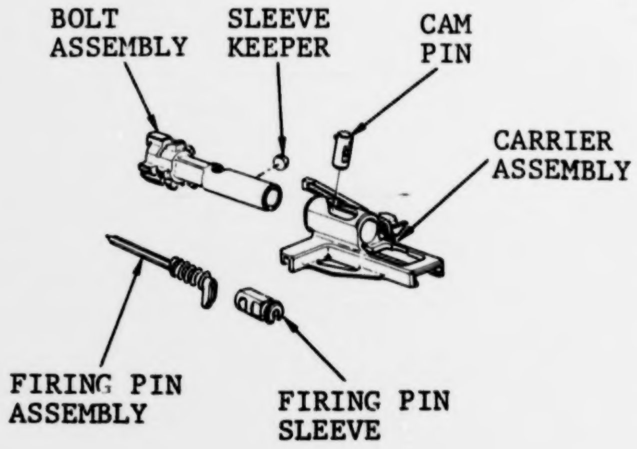
Replace breech assembly (para 2-48).

Assemble and install bolt and carrier assembly. Place a dummy round in face of bolt and perform receiver manual cycle check (para 2-10). If receiver still jams, replace gun (para 2-22) and notify Direct Support Maintenance for inspection of receiver assembly.

YES
NO
YES
NO



BREECH ASSEMBLY
RECEIVER ASSEMBLY



BOLT ASSEMBLY
SLEEVE KEEPER
CAM PIN
CARRIER ASSEMBLY
FIRING PIN ASSEMBLY
FIRING PIN SLEEVE

TROUBLESHOOTING (cont)

2-15. GUN CYCLES BUT WILL NOT FIRE

2-15

INITIAL SETUP

Applicable Configurations

All

Tools/Test and Support Equipment

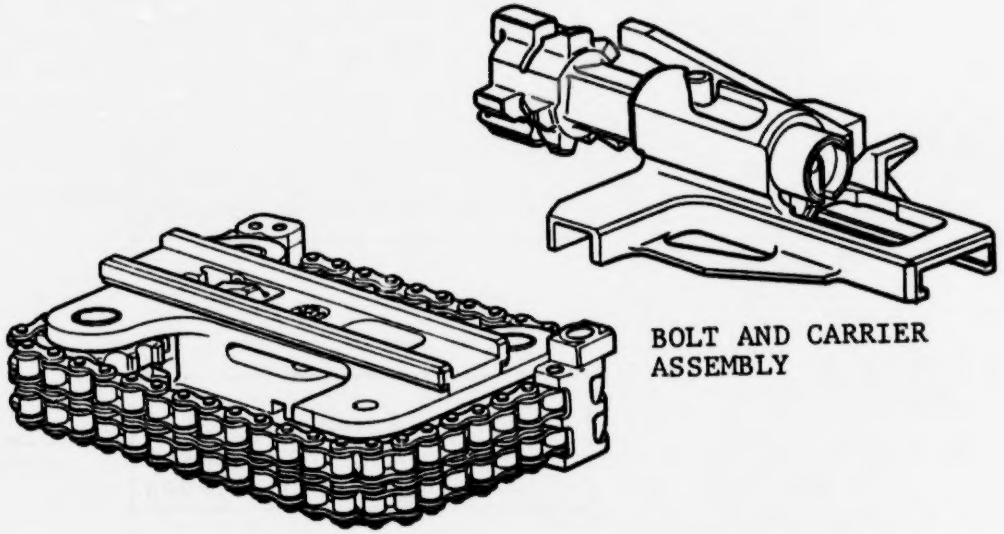
Turret Mechanic's Tool Kit
SC 5180-95CLB19
(Item 1, App B)

Personnel Required

45T Turret Mechanic

Equipment Conditions

Bolt and track assembly removed
(para 2-58)
Bolt and carrier assembly removed
(para 2-59)



BOLT AND CARRIER ASSEMBLY

TRACK ASSEMBLY

2-15. GUN CYCLES BUT WILL NOT FIRE (cont)

Rotate safety handle to fire and back to SAFE. Does safety pawi move up and down when safety handle is moved?

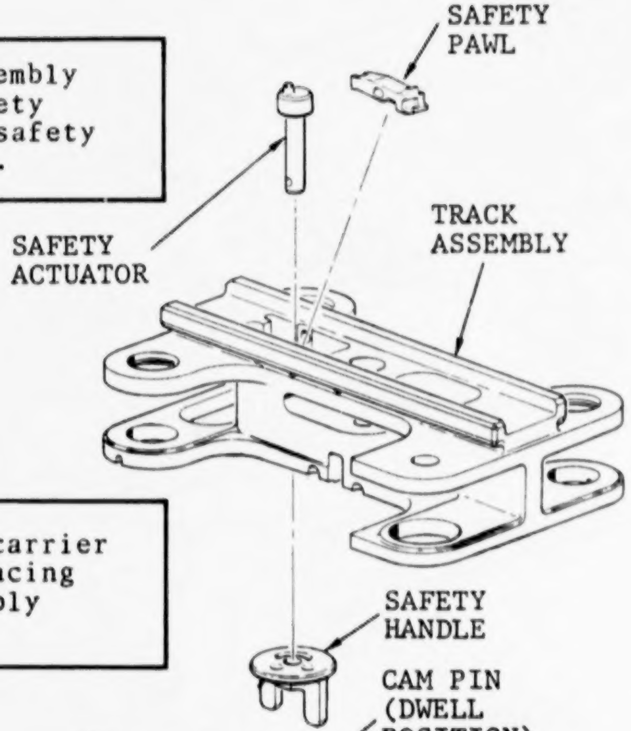
NO → Repair track assembly by replacing safety actuator and/or safety pawl (para 2-61).

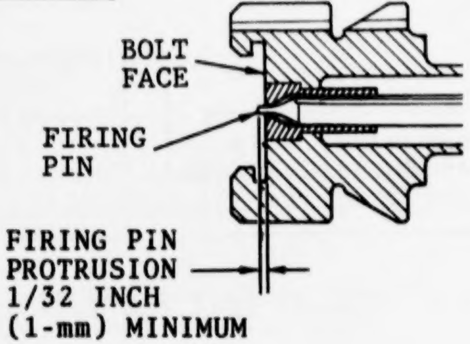
YES ↓

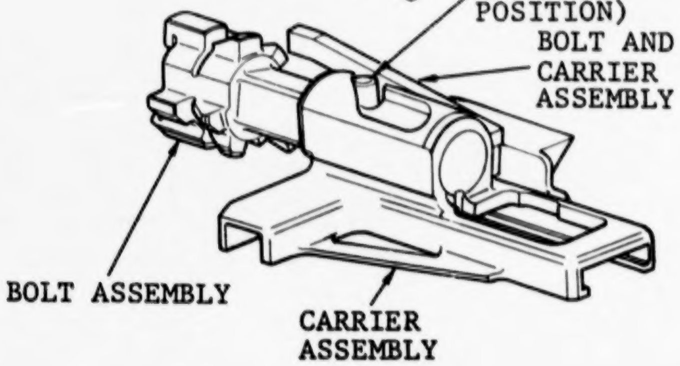
Remove bolt and carrier assembly from track (para 2-59) and place bolt in dwell position. Check firing pin protrusion. Is firing protrusion 1/32 in. (1-mm) mimimum.

NO → Repair bolt and carrier assembly by replacing firing pin assembly (para 2-60).

YES ↓


SAFETY PAWL
SAFETY ACTUATOR
TRACK ASSEMBLY
SAFETY HANDLE


BOLT FACE
FIRING PIN
FIRING PIN PROTRUSION 1/32 INCH (1-mm) MINIMUM


CAM PIN (DWELL POSITION)
BOLT AND CARRIER ASSEMBLY
BOLT ASSEMBLY
CARRIER ASSEMBLY

2-15. GUN CYCLES BUT WILL NOT FIRE (cont)

Disassemble bolt and carrier assembly (para 2-60) and check parts for cracks, breaks, chips or missing parts. Check firing pin assembly for burnt or broken firing pin tip, and broken spring. Do these conditions exist?

YES → Repair bolt and carrier by replacing defective parts (para 2-60).

NO ↓

Check firing pin pawl and safety pawl for chips, breaks, worn or missing parts. Do these conditions exist?

YES → Repair track assembly by replacing firing pin pawl, safety pawl, or spring (para 2-61).

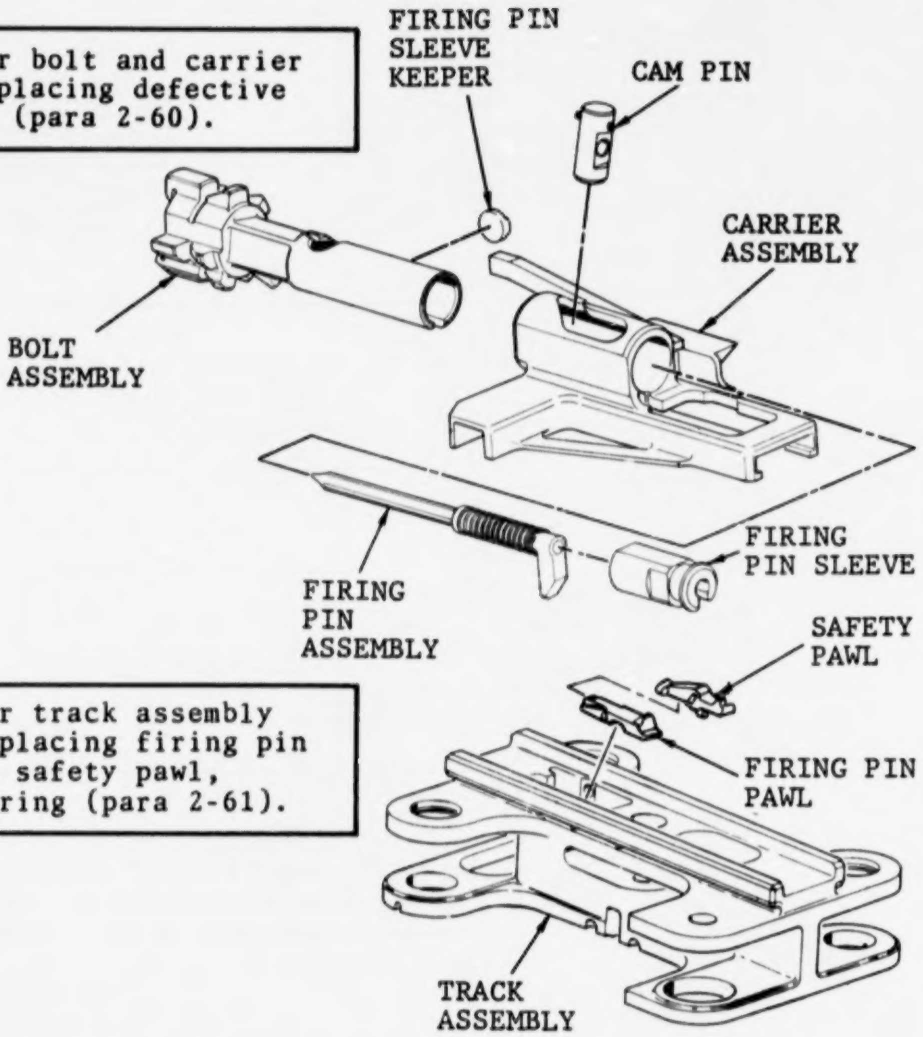
NO ↓

Press firing pin pawl. Does firing pin pawl return to original position?

NO → Repair track assembly by replacing firing pin pawl, safety pawl, or spring (para 2-61).

YES ↓

Install bolt and carrier (para 2-59) and perform receiver manual cycle check (para 2-10).


FIRING PIN SLEEVE KEEPER
CAM PIN
CARRIER ASSEMBLY
BOLT ASSEMBLY
FIRING PIN SLEEVE
FIRING PIN ASSEMBLY
SAFETY PAWL
FIRING PIN PAWL
TRACK ASSEMBLY

TROUBLESHOOTING (cont)

2-16. GUN FIRES WITH SAFETY ON

2-16

INITIAL SETUP

Applicable Configurations

All

Tools/Test and Support Equipment

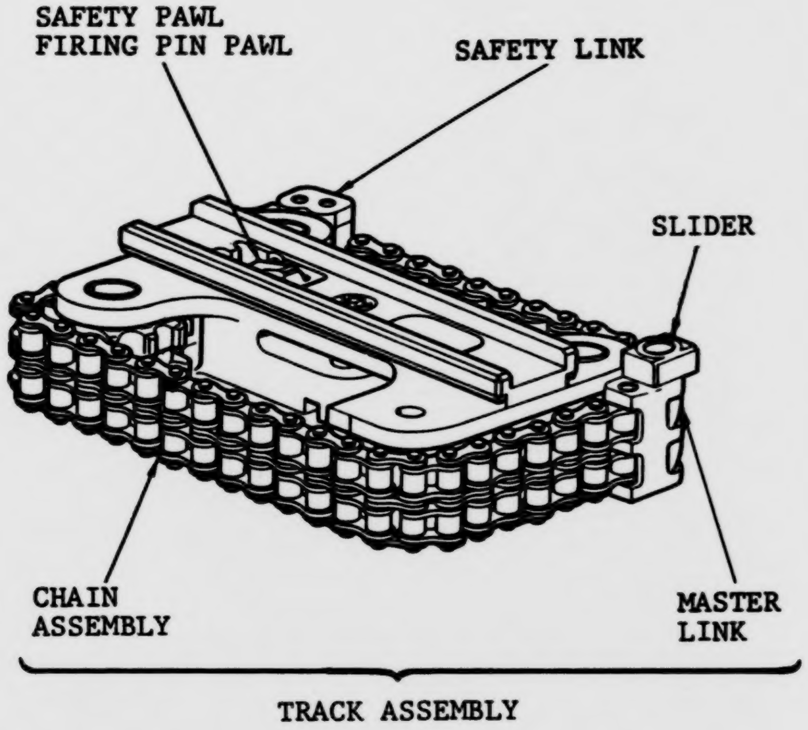
Turret Mechanic's Tool Kit
SC 5180-95CLB19
(Item 1, App B)

Personnel Required

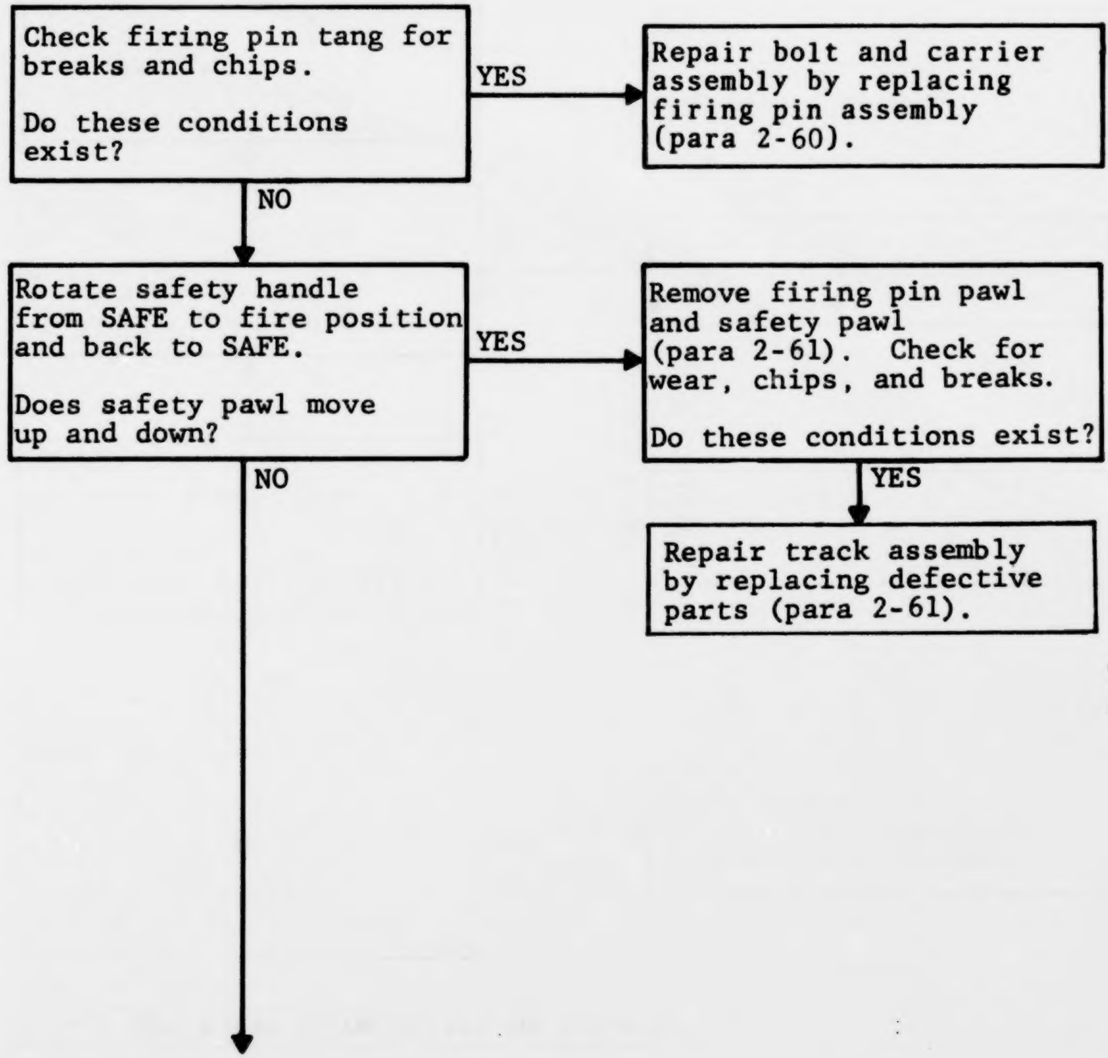
45T Turret Mechanic

Equipment Conditions

Bolt and track assembly removed
(para 2-58)
Bolt and carrier assembly removed
(para 2-59)


SAFETY PAWL
FIRING PIN PAWL
SAFETY LINK
SLIDER
CHAIN ASSEMBLY
MASTER LINK
TRACK ASSEMBLY

2-16. GUN FIRES WITH SAFETY ON (cont)



Check firing pin tang for breaks and chips.

Do these conditions exist?

Repair bolt and carrier assembly by replacing firing pin assembly (para 2-60).

Rotate safety handle from SAFE to fire position and back to SAFE.

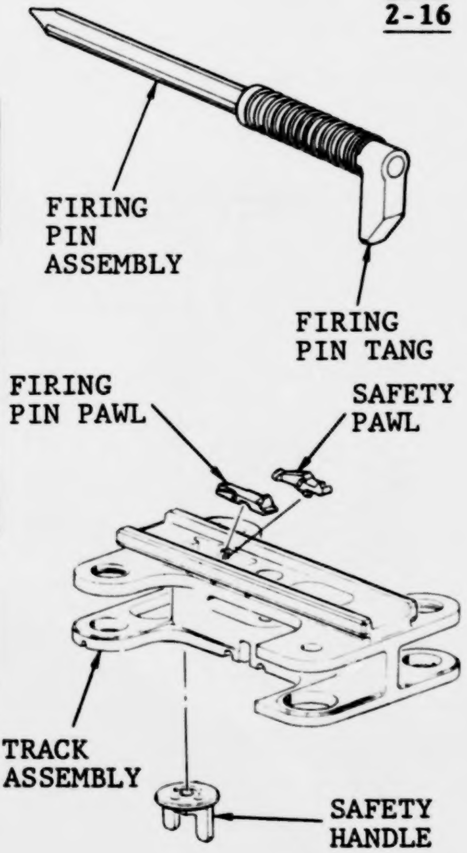
Does safety pawl move up and down?

Remove firing pin pawl and safety pawl (para 2-61). Check for wear, chips, and breaks.

Do these conditions exist?

Repair track assembly by replacing defective parts (para 2-61).

YES
NO
YES
NO
YES


FIRING PIN ASSEMBLY
FIRING PIN TANG
FIRING PIN PAWL
SAFETY PAWL
TRACK ASSEMBLY
SAFETY HANDLE

2-16. GUN FIRES WITH SAFETY ON (cont)

Remove safety actuator from track assembly (para 2-61). Check (pawl pin) spring and safety actuator for breaks.
Does this condition exist?

YES → Repair track assembly by replacing defective parts (para 2-61).

NO ↓

Check pawl pin for galls and breaks.

Do these conditions exist?

YES → Repair track assembly by replacing pawl pin (para 2-61).

NO ↓

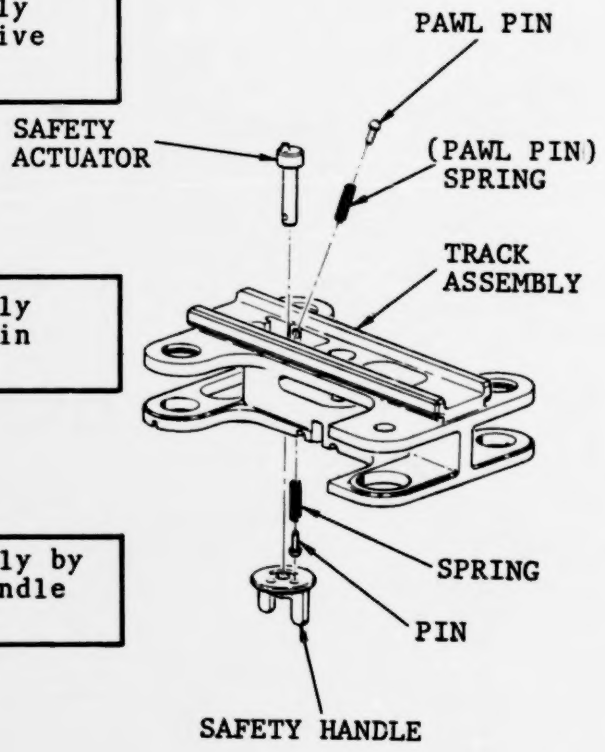
Check safety handle for breaks and galls.

Do these conditions exist?

YES → Repair track assembly by replacing safety handle (para 2-61).

NO ↓

Assemble track assembly (para 2-61). Install bolt and carrier assembly (para 2-59). Install bolt and track assembly (para 2-58)
Perform receiver manual cycle check (para 2-10).


PAWL PIN
SAFETY ACTUATOR
(PAWL PIN) SPRING
TRACK ASSEMBLY
SPRING
PIN
SAFETY HANDLE

2-17. GUN FIRES INTERMITTENTLY

INITIAL SETUP

Applicable Configurations

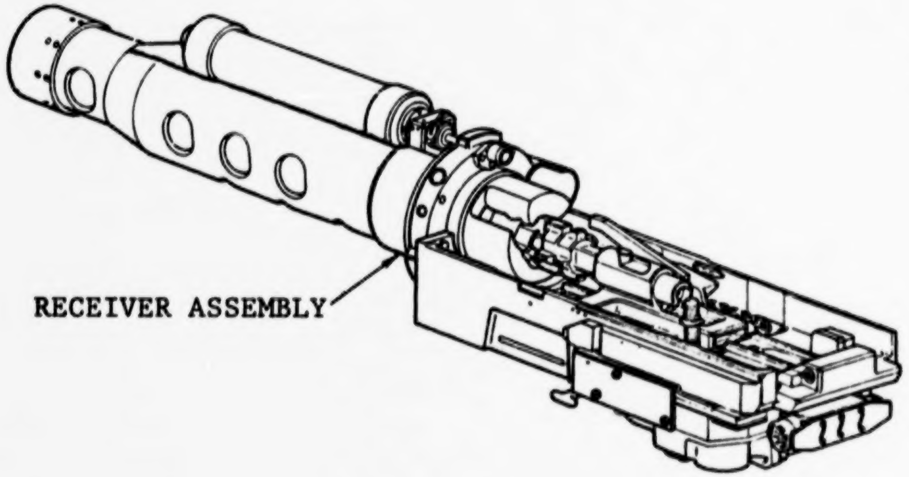
All

Tools/Test and Support Equipment

Turret Mechanic's Tool Kit
  SC 5180-95CLB19
  (Item 1, App B)

Personnel Required

45T Turret Mechanic



2-17. GUN FIRES INTERMITTENTLY (cont)

Check both feeder and receiver electrical connectors for broken or bent case, and broken or bent pins. Do these conditions exist?

YES → If feeder electrical connectors are damaged, replace feeder assembly (para 2-27) and forward defective feeder to Direct Support Maintenance for repair. If motor connector is damaged, replace motor (para 2-64), and forward defective motor to Direct Support Maintenance for repair.

NO ↓

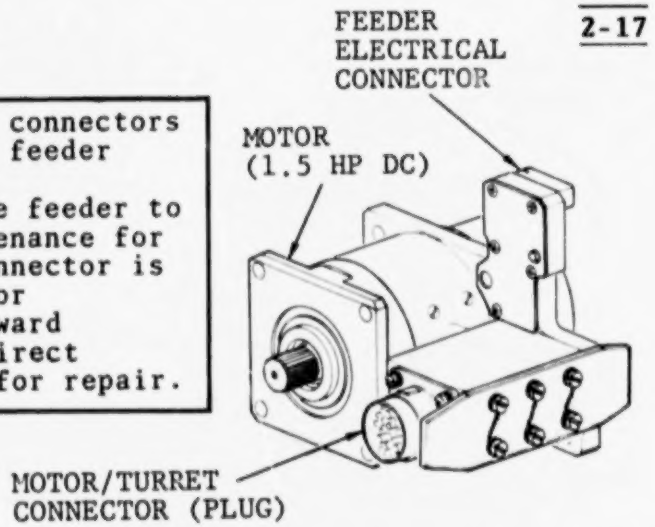
Unlatch and rotate feeder lock handle to unlocked position and then back to lock position. Check that handle is fully locked. Does feeder handle move in and out?

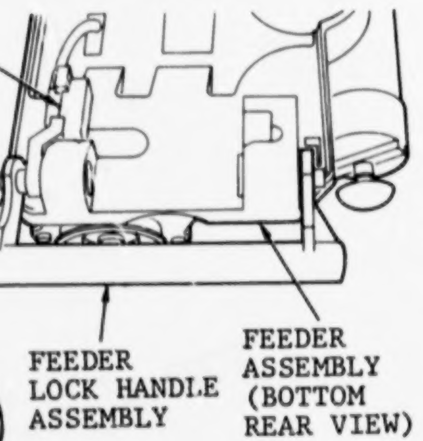
NO → Repair lock handle assembly (para 2-41).

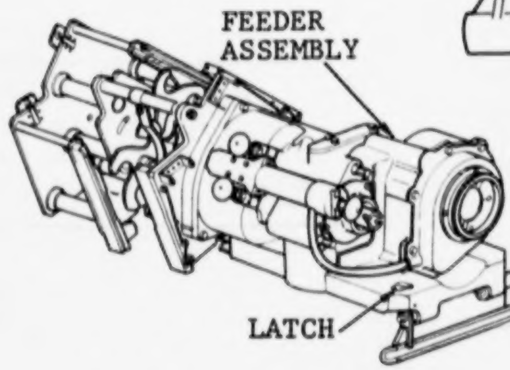
YES ↓

Install feeder assembly (para 2-27).

↓

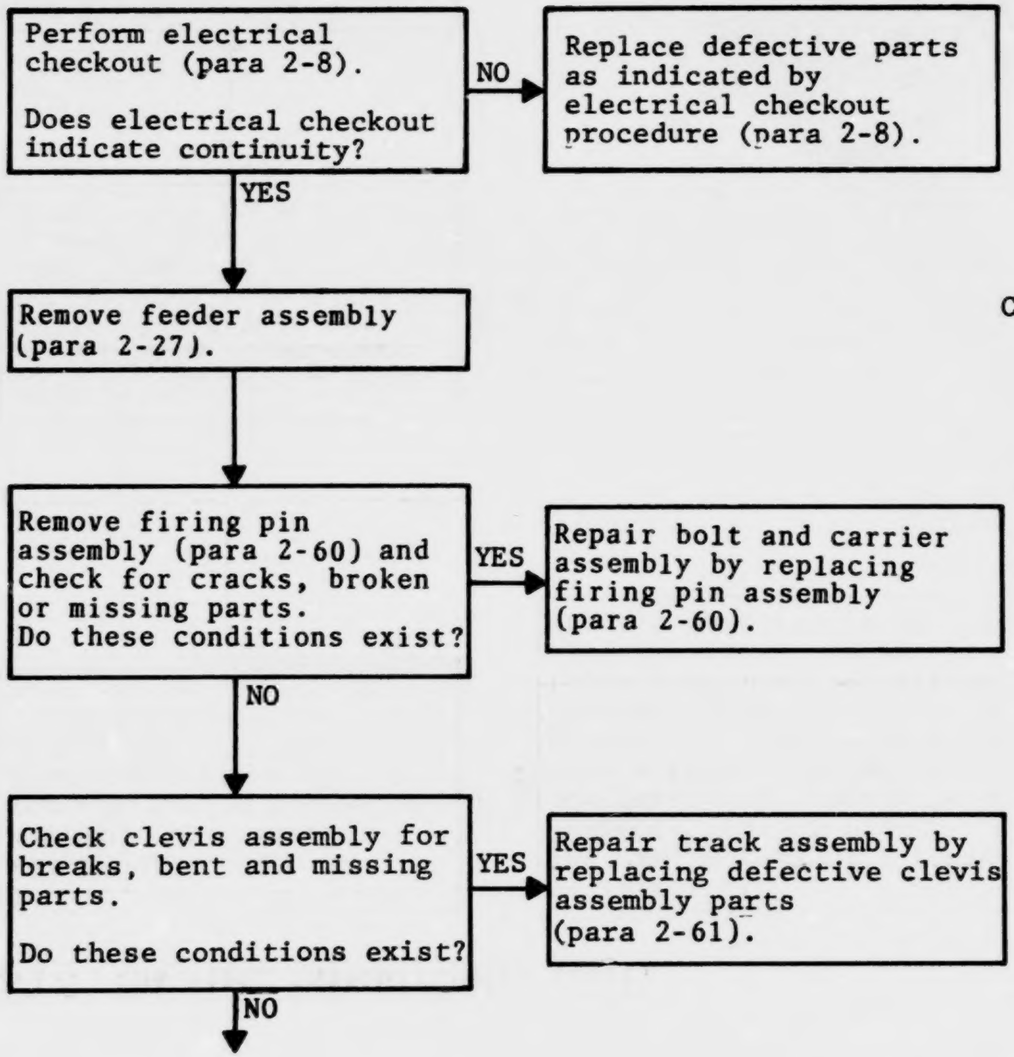

FEEDER ELECTRICAL CONNECTOR
MOTOR (1.5 HP DC)
MOTOR/TURRET CONNECTOR (PLUG)


FEEDER ELECTRICAL CONNECTOR
FEEDER LOCK HANDLE ASSEMBLY
FEEDER ASSEMBLY (BOTTOM REAR VIEW)


FEEDER ASSEMBLY
LATCH
FEEDER LOCK HANDLE ASSEMBLY

TROUBLESHOOTING (cont)

2-17. GUN FIRES INTERMITTENTLY (cont)


NO
YES
YES
NO
YES
NO

Perform electrical checkout (para 2-8).

Does electrical checkout indicate continuity?

Replace defective parts as indicated by electrical checkout procedure (para 2-8).

Remove feeder assembly (para 2-27).

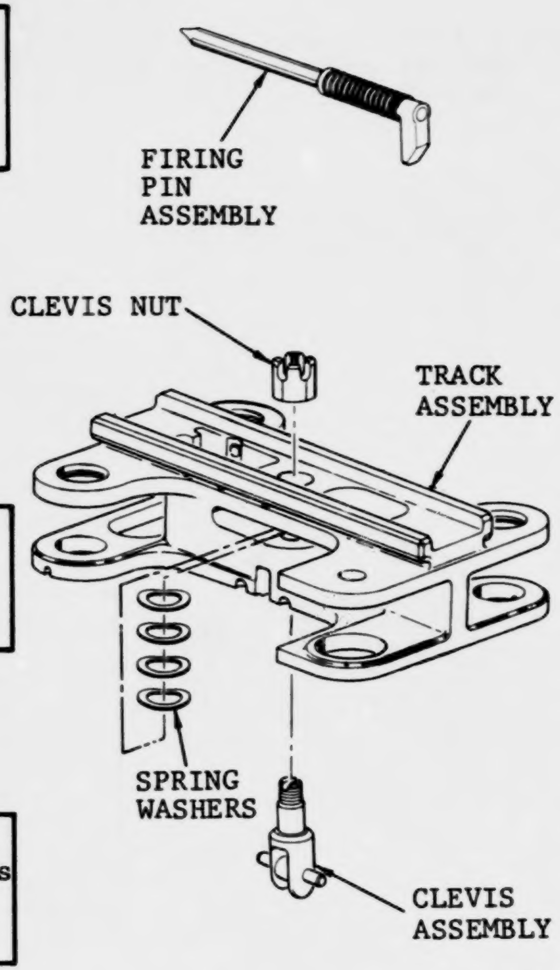
Remove firing pin assembly (para 2-60) and check for cracks, broken or missing parts.
Do these conditions exist?

Repair bolt and carrier assembly by replacing firing pin assembly (para 2-60).

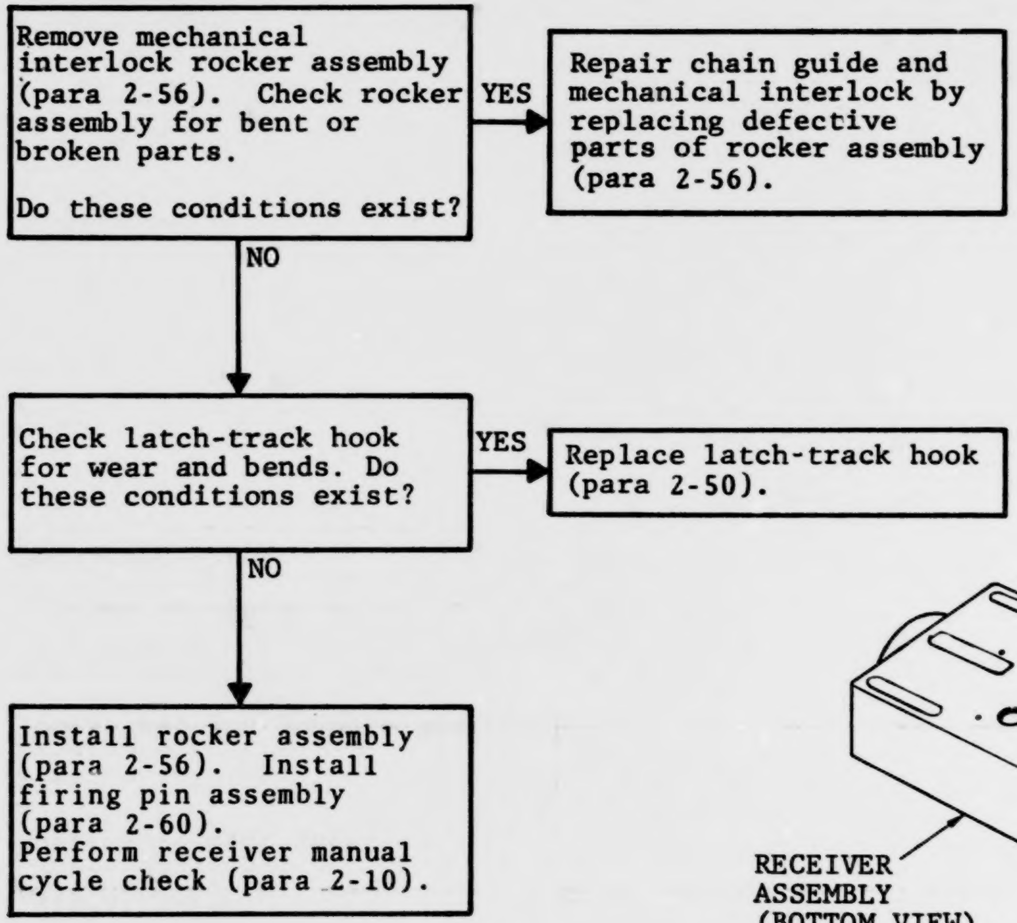
Check clevis assembly for breaks, bent and missing parts.

Do these conditions exist?

Repair track assembly by replacing defective clevis assembly parts (para 2-61).


FIRING PIN ASSEMBLY
CLEVIS NUT
TRACK ASSEMBLY
SPRING WASHERS
CLEVIS ASSEMBLY

2-17. GUN FIRES INTERMITTENTLY (cont)



Remove mechanical interlock rocker assembly (para 2-56). Check rocker assembly for bent or broken parts.

Do these conditions exist?

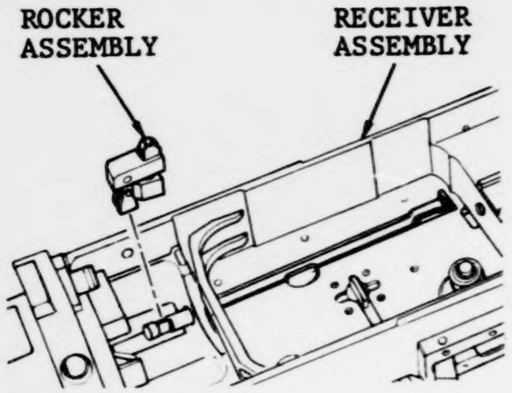
Repair chain guide and mechanical interlock by replacing defective parts of rocker assembly (para 2-56).

Check latch-track hook for wear and bends. Do these conditions exist?

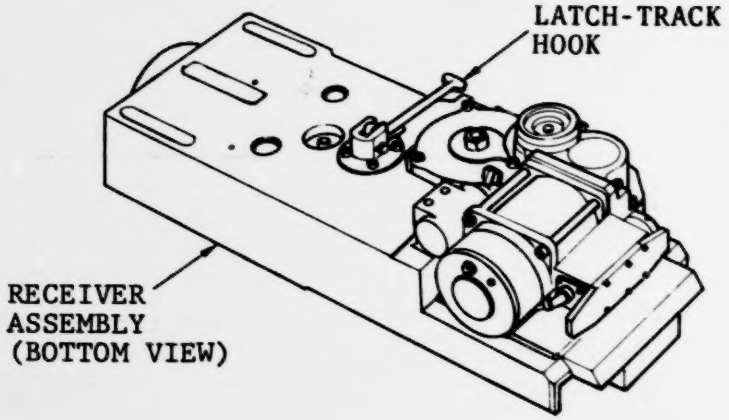
Replace latch-track hook (para 2-50).

Install rocker assembly (para 2-56). Install firing pin assembly (para 2-60). Perform receiver manual cycle check (para 2-10).

YES
NO
YES
NO



ROCKER ASSEMBLY
RECEIVER ASSEMBLY



LATCH-TRACK HOOK
RECEIVER ASSEMBLY (BOTTOM VIEW)

2-18. EXCESSIVE RECOIL OR INADEQUATE DAMPENING

INITIAL SETUP

Applicable Configurations

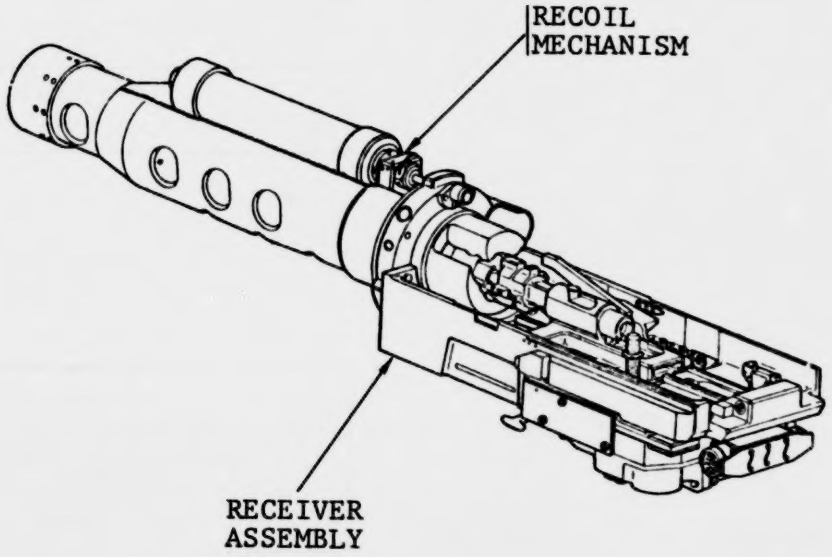
All

Tools/Test and Support Equipment

Turret Mechanic's Tool Kit
SC 5180-95CLB19
(Item 1, App B)

Personnel Required

45T Turret Mechanic


RECOIL MECHANISM
RECEIVER ASSEMBLY

2-18. EXCESSIVE RECOIL OR INADEQUATE DAMPENING (cont) 2-18

Check reservoir piston rod protusion. Is sufficient damper fluid indicated?

NO → Remove and inspect recoil mechanism (para 2-62). If not damaged or leaking, service recoil mechanism (para 2-65). If damage or leakage exists, replace recoil mechanism (para 2-62) and forward defective recoil mechanism to Direct Support Maintenance for repair.

YES ↓

Check damper nut for cracks and stripped threads.

Check breech assembly lug for breaks.

Do these conditions exist?

YES → Replace damper nut if damaged (para 2-62).

Replace breech assembly if lug is broken (para 2-48).

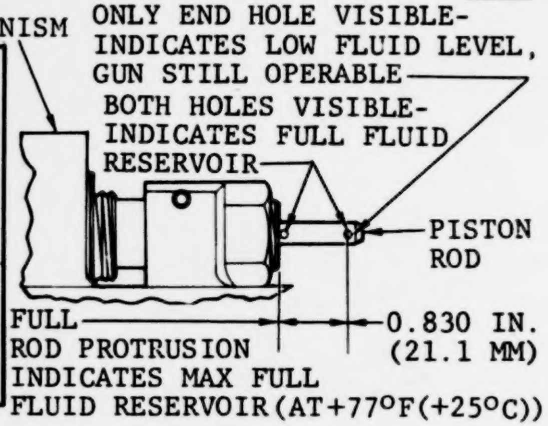
NO ↓

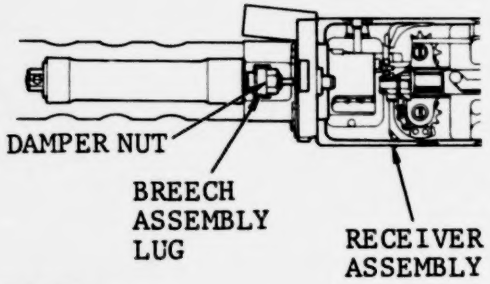
Check exposed end of spring support for stripped threads and breaks.

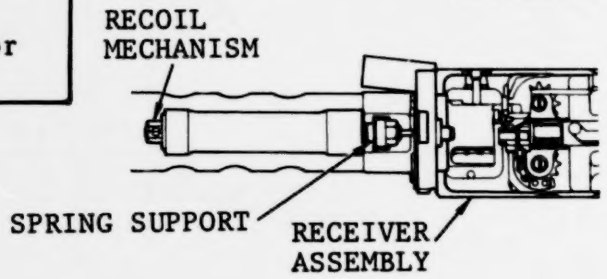
Do these conditions exist?

YES → Replace recoil mechanism (para 2-62) and forward defective recoil mechanism to Direct Support Maintenance for repair.

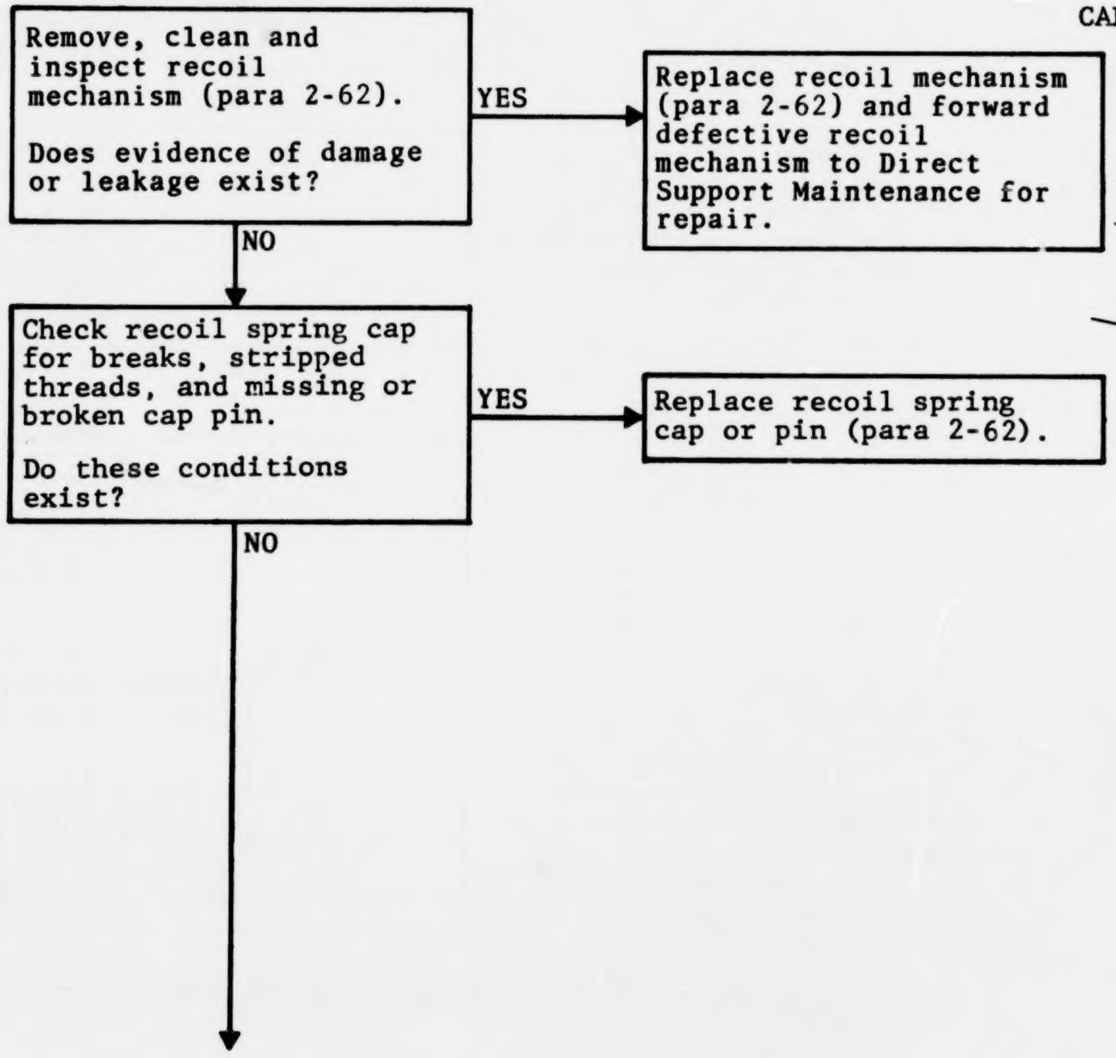
NO ↓


RECOIL MECHANISM
ONLY END HOLE VISIBLE-
INDICATES LOW FLUID LEVEL,
GUN STILL OPERABLE
BOTH HOLES VISIBLE-
INDICATES FULL FLUID
RESERVOIR
PISTON
ROD
FULL
ROD PROTRUSION
INDICATES MAX FULL
FLUID RESERVOIR (AT +77°F (+25°C))
0.830 IN.
(21.1 MM)


DAMPER NUT
BREECH
ASSEMBLY
LUG
RECEIVER
ASSEMBLY


RECOIL
MECHANISM
SPRING SUPPORT
RECEIVER
ASSEMBLY

2-18. EXCESSIVE RECOIL OR INADEQUATE DAMPENING (cont)



Remove, clean and inspect recoil mechanism (para 2-62).

Does evidence of damage or leakage exist?

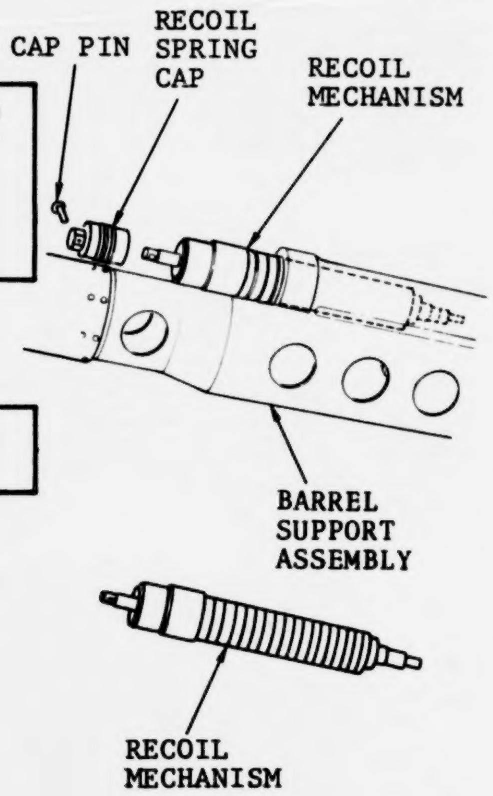
YES: Replace recoil mechanism (para 2-62) and forward defective recoil mechanism to Direct Support Maintenance for repair.

NO: Check recoil spring cap for breaks, stripped threads, and missing or broken cap pin.

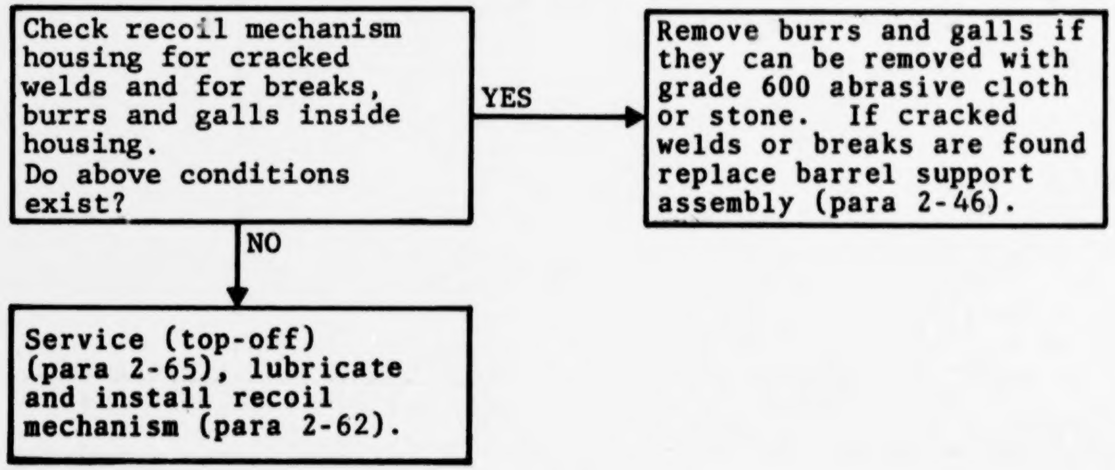
Do these conditions exist?

YES: Replace recoil spring cap or pin (para 2-62).

NO


CAP PIN
RECOIL SPRING CAP
RECOIL MECHANISM
BARREL SUPPORT ASSEMBLY
RECOIL MECHANISM

2-18. EXCESSIVE RECOIL OR INADEQUATE DAMPENING (cont)


Check recoil mechanism housing for cracked welds and for breaks, burrs and galls inside housing.
Do above conditions exist?

Remove burrs and galls if they can be removed with grade 600 abrasive cloth or stone. If cracked welds or breaks are found replace barrel support assembly (para 2-46).

Service (top-off) (para 2-65), lubricate and install recoil mechanism (para 2-62).

2-19. GUN FIRES AT IRREGULAR RATE

INITIAL SETUP

Applicable Configurations

All

Tools/Test and Support Equipment

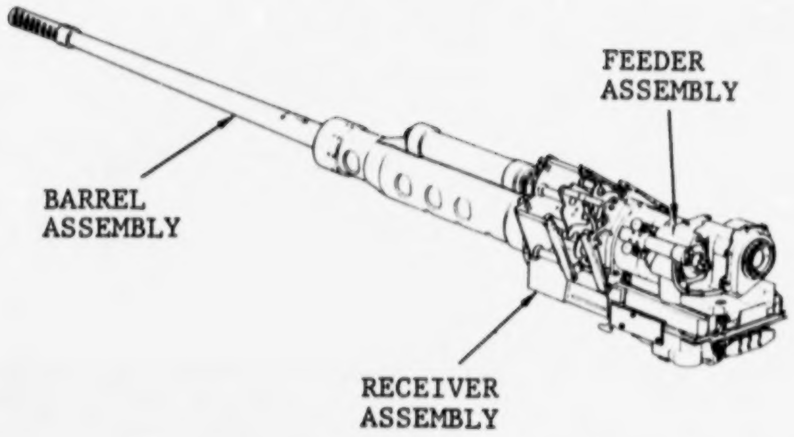
Turret Mechanic's Tool Kit
SC 5180-95CLB19
(Item 1, App B)

Personnel Required

45T Turret Mechanic

Equipment Conditions

Feeder assembly installed
(para 2-27)


FEEDER ASSEMBLY
BARREL ASSEMBLY
RECEIVER ASSEMBLY

2-19. GUN FIRES AT IRREGULAR RATE (cont)

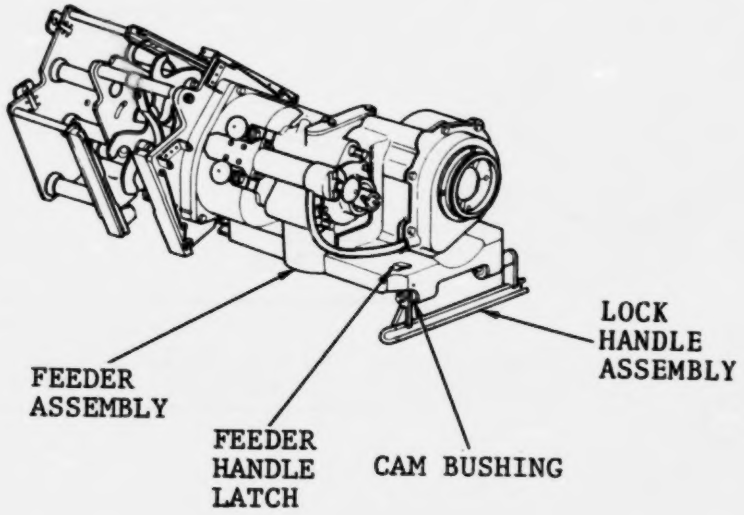
Press feeder handle latch and rotate handle up to unlock position. Rotate handle down to lock position. Release latch.

Does feeder handle cam bushing move handle to right (unlock) when raised, and to left (lock) when lowered?

NO → Repair lock handle assembly (para 2-41).

YES ↓

Remove feeder assembly (para 2-27).


LOCK HANDLE ASSEMBLY
FEEDER ASSEMBLY
FEEDER HANDLE LATCH
CAM BUSHING

TROUBLESHOOTING (cont)

2-19. GUN FIRES AT IRREGULAR RATE (cont)

Use 3/16-inch drive pin punch. Push on handle lock pin from right side of receiver assembly.

Does handle lock pin protrude out left side of receiver and return to position when released?

NO → Replace handle lock pin or defective parts (para 2-51).

YES ↓

Remove bolt and track assembly (para 2-58) Remove bolt and carrier assembly (para 2-60). Check sliding surface of track rails for bends and galls.

Do these conditions exist?

YES → Repair track assembly by replacing track (para 2-61).

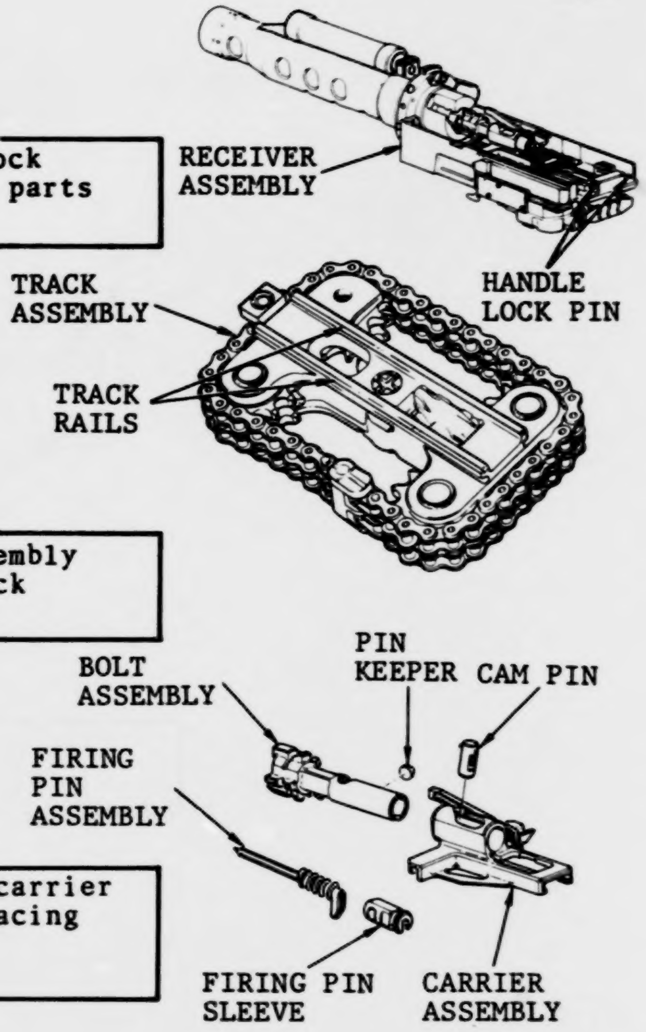
NO ↓

Disassemble bolt and carrier assembly (para 2-60). Check bolt and carrier parts for breaks and bends.

Do these conditions exist?

YES → Repair bolt and carrier assembly by replacing defective parts (para 2-60).

NO ↓


RECEIVER ASSEMBLY
HANDLE LOCK PIN
TRACK ASSEMBLY
TRACK RAILS
BOLT ASSEMBLY
PIN KEEPER
CAM PIN
FIRING PIN ASSEMBLY
FIRING PIN SLEEVE
CARRIER ASSEMBLY

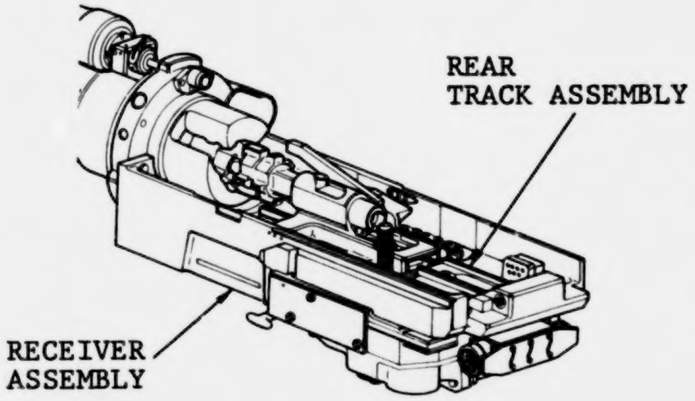
2-19. GUN FIRES AT IRREGULAR RATE (cont)

Check rear track for galls, scoring and bends.

Do these conditions exist?

YES → Replace rear track (para 2-52).

NO ↓

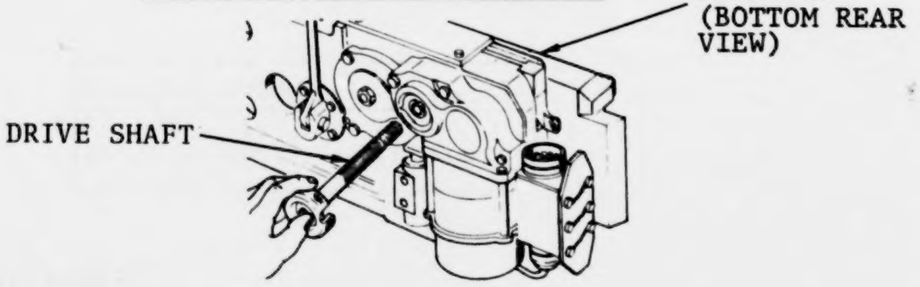

REAR TRACK ASSEMBLY
RECEIVER ASSEMBLY

Check drive shaft for stripped splines.

Do these conditions exist?

YES → Replace drive shaft (para 2-49).

NO ↓

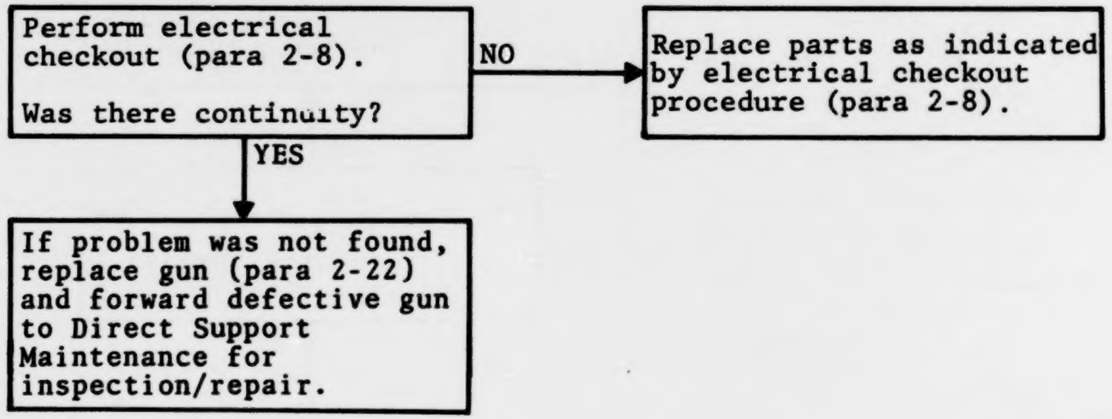

RECEIVER ASSEMBLY (BOTTOM REAR VIEW)
DRIVE SHAFT

Assemble bolt and carrier (para 2-60). Install bolt and carrier (para 2-59). Install bolt and track assembly (para 2-58).

↓

TROUBLESHOOTING (cont)

2-19. GUN FIRES AT IRREGULAR RATE (cont)

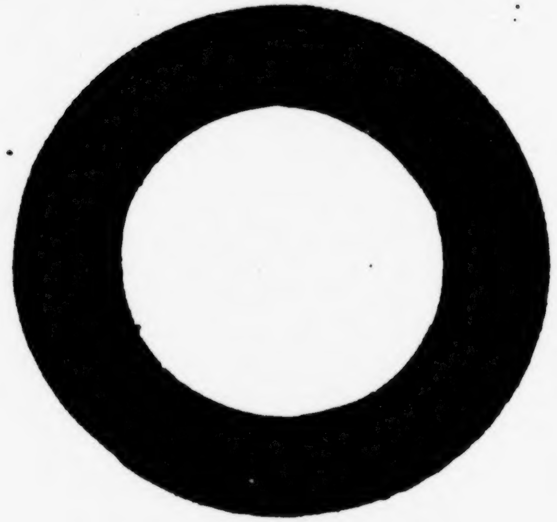


Perform electrical checkout (para 2-8).

Was there continuity?

Replace parts as indicated by electrical checkout procedure (para 2-8).

If problem was not found, replace gun (para 2-22) and forward defective gun to Direct Support Maintenance for inspection/repair.



TROUBLESHOOTING (cont)

2-20. GUN FIRES WITHOUT HANGFIRE

INITIAL SETUP

Applicable Configurations

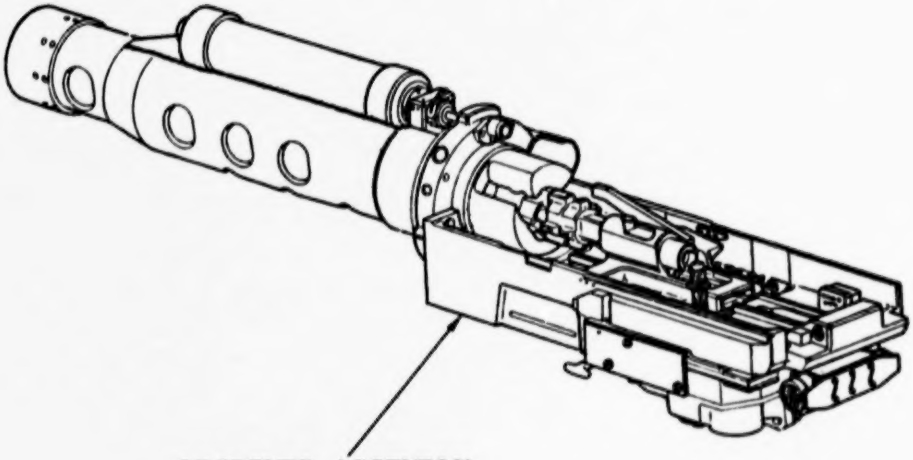
All

Tools/Test and Support Equipment

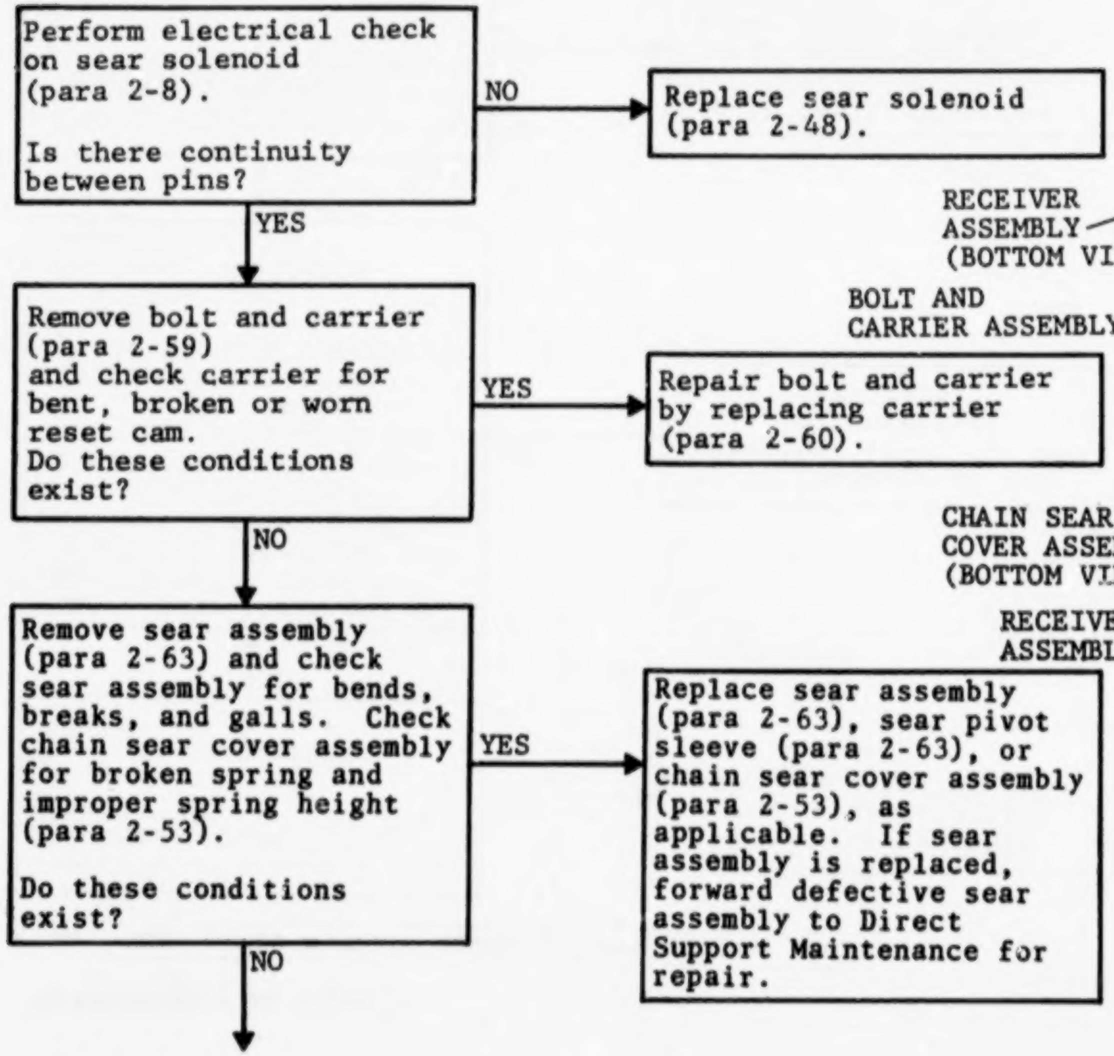
Turret Mechanic's Tool Kit
SC 5180-95CLB19
(Item 1, App B)

Personnel Required

45T Turret Mechanic


RECEIVER ASSEMBLY

2-20. GUN FIRES WITHOUT HANGFIRE PROTECTION (cont)



Perform electrical check on sear solenoid (para 2-8).

Is there continuity between pins?

NO → Replace sear solenoid (para 2-48).

YES ↓

Remove bolt and carrier (para 2-59) and check carrier for bent, broken or worn reset cam.
Do these conditions exist?

YES → Repair bolt and carrier by replacing carrier (para 2-60).

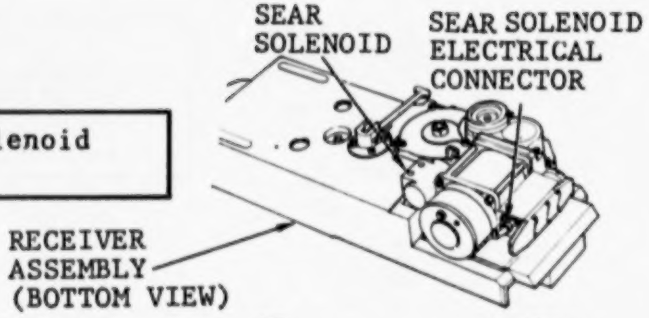
NO ↓

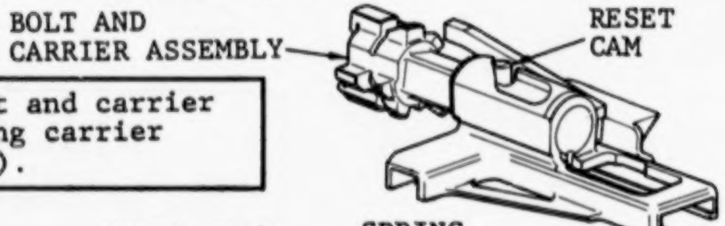
Remove sear assembly (para 2-63) and check sear assembly for bends, breaks, and galls. Check chain sear cover assembly for broken spring and improper spring height (para 2-53).

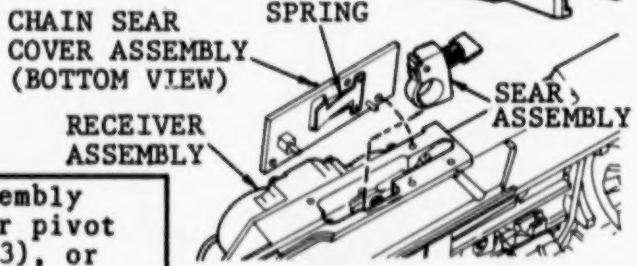
Do these conditions exist?

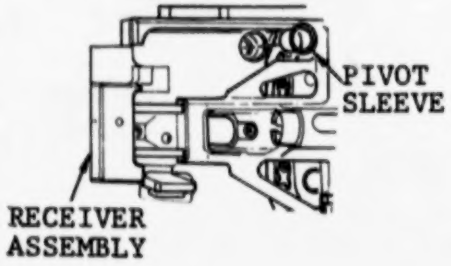
YES → Replace sear assembly (para 2-63), sear pivot sleeve (para 2-63), or chain sear cover assembly (para 2-53), as applicable. If sear assembly is replaced, forward defective sear assembly to Direct Support Maintenance for repair.

NO ↓


SEAR SOLENOID
SEAR SOLENOID ELECTRICAL CONNECTOR
RECEIVER ASSEMBLY (BOTTOM VIEW)


BOLT AND CARRIER ASSEMBLY
RESET CAM


CHAIN SEAR COVER ASSEMBLY (BOTTOM VIEW)
SPRING
SEAR ASSEMBLY
RECEIVER ASSEMBLY


PIVOT SLEEVE
RECEIVER ASSEMBLY

2-20. GUN FIRES WITHOUT HANGFIRE PROTECTION (cont)

Check chain assembly for cracked or worn safety link.

Do these conditions exist?

YES → Repair track assembly by replacing defective chain assembly (para 2-61).

NO ↓

Remove rear chain guide (para 2-56). Check mechanical interlock sear push rod, crank, push rod extension, and sear release link for cracks, bends, galling, obvious wear, or contamination. Check push rod extension spring for improper free length.

Do these conditions exist?

YES → Repair chain guide and mechanical interlock by replacing defective parts (para 2-56).

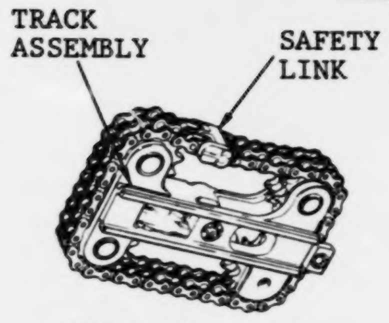
NO ↓

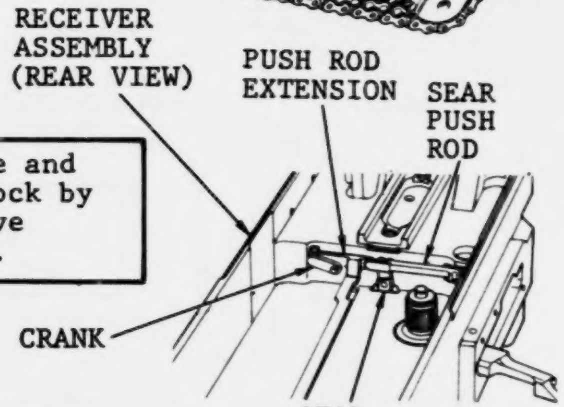
Check rocker assembly for cracked or bent rocker and/or housing, broken or missing pin or spring.

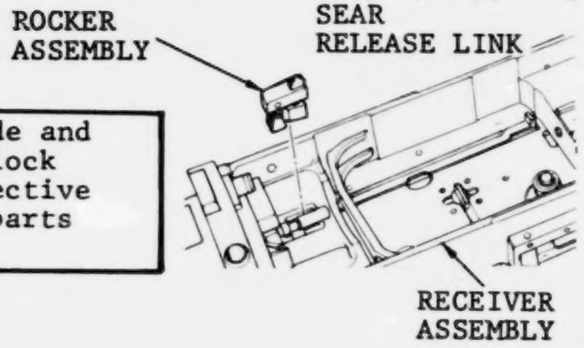
Do these conditions exist?

YES → Repair chain guide and mechanical interlock by replacing defective rocker assembly parts (para 2-56).

NO ↓


TRACK ASSEMBLY
SAFETY LINK


RECEIVER ASSEMBLY (REAR VIEW)
PUSH ROD EXTENSION
SEAR PUSH ROD
CRANK
SEAR RELEASE LINK


ROCKER ASSEMBLY
RECEIVER ASSEMBLY

2-20. GUN FIRES WITHOUT HANGFIRE PROTECTION (cont)

Check mechanical interlock actuator rod assembly for bends, breaks, cracks, obvious wear, or contamination of rod channel.

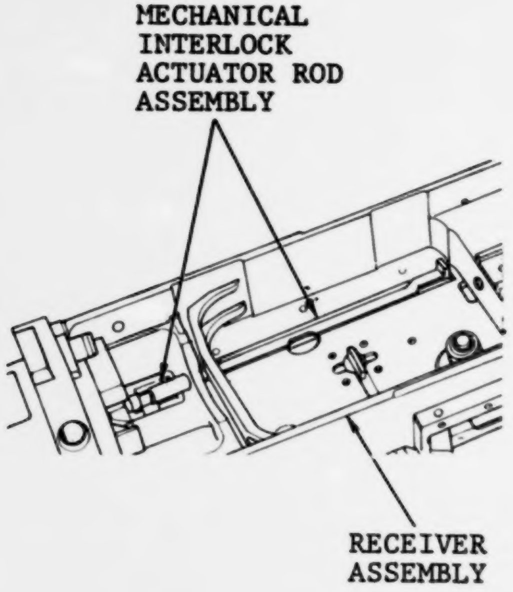
Do these conditions exist?

YES

Repair chain guides and mechanical interlock by replacing actuator rod assembly (para 2-56).

NO

Perform receiver manual cycle check (para 2-10).


MECHANICAL INTERLOCK ACTUATOR ROD ASSEMBLY
RECEIVER ASSEMBLY

Section V. MAINTENANCE PROCEDURES

2-21. GENERAL 2-21

The maintenance instructions include removal, inspection, lubrication and installation functions for each maintenance task. Repair instructions are also included for the gun lock handle, round positioner assembly, chain guides and mechanical interlock, bolt and track assembly, bolt and carrier assembly, track assembly and receiver gears.

2-22. MAINTENANCE OF GUN 2-22

This task covers : a. Inspection c. Repair
b. Testing d. Replacement

INSPECTION: Troubleshoot gun off vehicle (para 2-7). Inspect gun on vehicle, refer to applicable operator's manual and PMCS.

SEMI-ANNUAL INSPECTION: Refer to gun semi-annual inspection (para 2-6).

TESTING: Functional test of gun (electrical), refer to applicable operators manual.

REPAIR: Gun repair at organizational level is indicated by inspection or troubleshooting (para 2-7). Repair of the gun at organizational level is accomplished by one or more of the following:

1. Replacing the barrel assembly (para 2-24).
2. Repairing the barrel assembly (para 2-25).
3. Replacing the feeder assembly (para 2-27).
4. Repairing the feeder assembly (para 2-26).
5. Repairing the receiver assembly (para 2-45).

If the receiver assembly cannot be repaired at the organizational level, the entire gun will be replaced, and the unserviceable gun (barrel assembly, feeder assembly, and receiver assembly) sent to Direct Support Maintenance.

REPLACEMENT: If the gun is damaged or unserviceable, and it cannot be repaired at organizational level, replace with a serviceable gun. Send unserviceable gun (barrel, feeder, and receiver) to Direct Support Maintenance. For gun replacement instructions, see the following:

1. Replace barrel assembly (para 2-24).
2. Replace feeder assembly (para 2-27).

2-23. MAINTENANCE OF BARREL ASSEMBLY 2-23

This task covers: a. Inspection b. Repair c. Replacement

INSPECTION

Inspect barrel assembly for the following:

a. Loose muzzle brake.

b. Missing pin.

c. Bent Barrel.

SEMI-ANNUAL INSPECTION: See semi-annual inspection (para 2-6).

REPAIR: Barrel assembly repair is indicated by semi-annual inspection (para 2-6). Repair of the barrel assembly at organizational level consists of the following:

Replace muzzle brake (para 2-25).

REPLACEMENT: If the barrel assembly is damaged or unserviceable and it cannot be repaired at organizational level, replace with a serviceable barrel assembly (para 2-24) and forward unserviceable barrel assembly to Direct Support Maintenance.

2-24. REPLACE BARREL ASSEMBLY 2-24

This task covers:
a. Removal
b. Cleaning
c. Inspection
d. Lubrication
e. Installation

INITIAL SETUP

Applicable Configurations

All

Materials/Parts

Barrel Assembly
  12524001 (Fig. 1, Item 1, App C)
Grease (D2)
Dry Cleaning Solvent (D3)
Wiping Rags (D4)
Heat Mittens
  HH-M-391 (Item 14, App B)

Personnel Required:

45T Turret Mechanic
Helper

General Safety Instructions:

WARNING

Dry cleaning solvent is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

Do not wear jewelry when working on the gun.

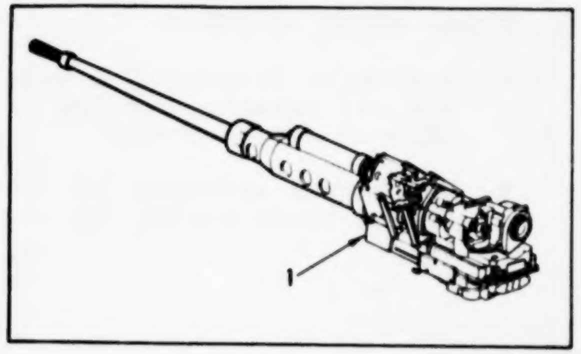
Keep your fingers away from moving parts of gun.

Barrel assembly will be hot after repeated firing. Wear heat mittens when removing barrel assembly to avoid being burned. If you become burned, get medical help immediately.

REMOVAL

1. **PLACE GUN ASSEMBLY (1) ON A CLEAN FLAT SURFACE.**

   a. Position gun (1) as shown.

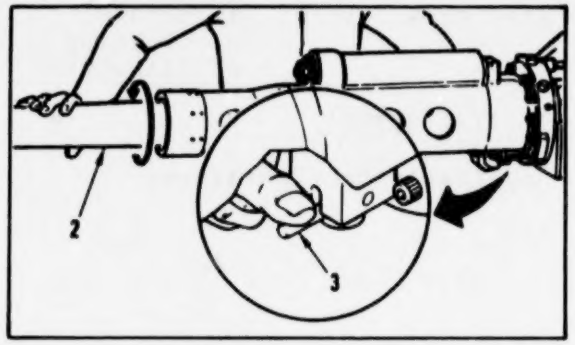


2-24. REPLACE BARREL ASSEMBLY (cont) 2-24

REMOVAL (cont)

2. **REMOVE BARREL ASSEMBLY.**

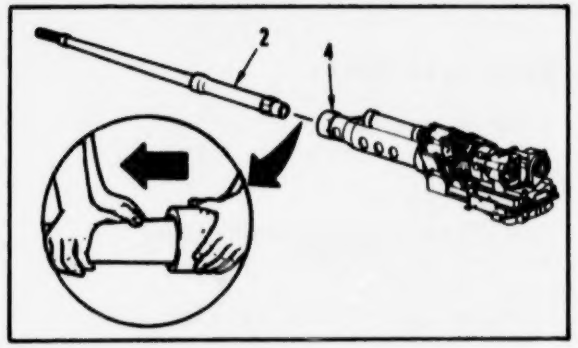
   a. Press down on barrel lock pin (3) and rotate barrel (2) to the right.



WARNING

Barrel assembly is extremely heavy. Use a helper to remove the barrel assembly. If barrel assembly falls and hurts you, get medical help at once.

   b. Pull barrel (2) out of barrel support (4).



CLEANING

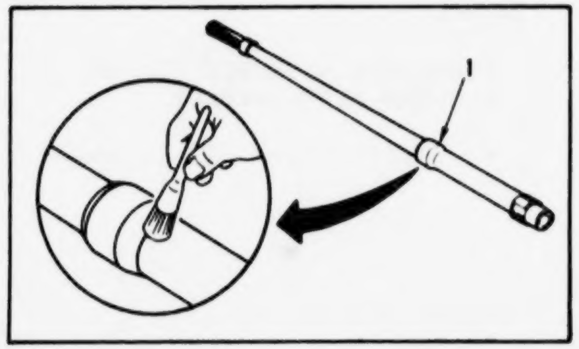
WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

1. **CLEAN BARREL ASSEMBLY.**

   a. Use paint (cleaning) brush and dry cleaning solvent (D3) to remove grease.

   b. Dry barrel assembly (1) with a clean wiping rag (D4).



2-24. REPLACE BARREL ASSEMBLY (cont) 2-24

INSPECTION

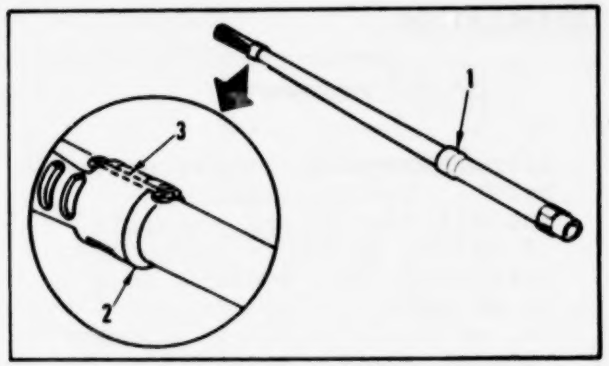
1. **INSPECT BARREL ASSEMBLY.**

   a. Visually inspect barrel (1) for cracks, bends, or breaks.

   b. Get a new barrel (1) if above conditions are found.

   c. Visually inspect muzzle brake (2) for installed cotter pin (3).

   d. Replace cotter pin (3) if missing (para 2-25).

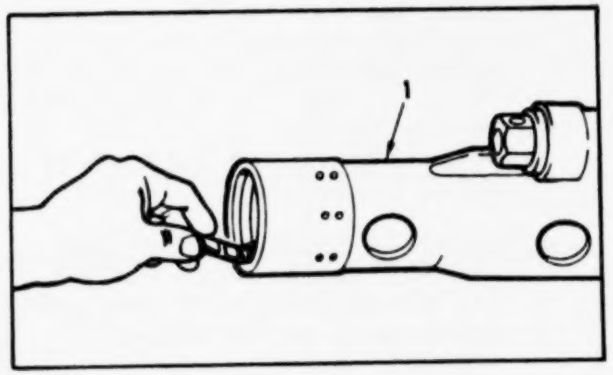


LUBRICATION

1. **LUBRICATE BARREL SUPPORT.**

   a. Use acid brush. Fill grooves inside barrel support (1) with grease (D2).

   b. Use acid brush. Apply a light coat of grease (D2) to flat surfaces inside barrel support (1).



2-24. REPLACE BARREL ASSEMBLY (cont) 2-24

INSTALLATION

WARNING

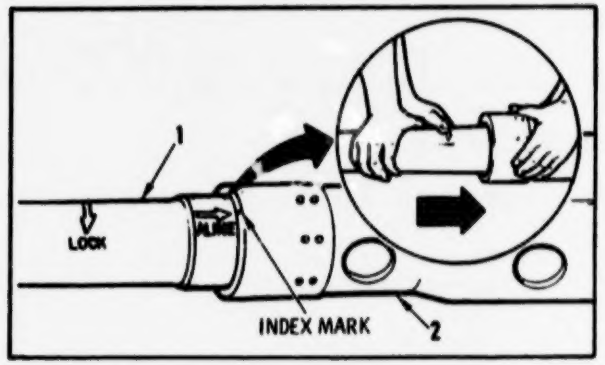
Barrel assembly is extremely heavy. Use a helper to install the barrel assembly. If barrel assembly falls and hurts you, get medical help at once.

1. **INSTALL BARREL ASSEMBLY.**

   a. Insert barrel (1) into support (2).

   b. Rotate barrel (1) until the ALINE arrow is alined with the index mark on barrel support (2).

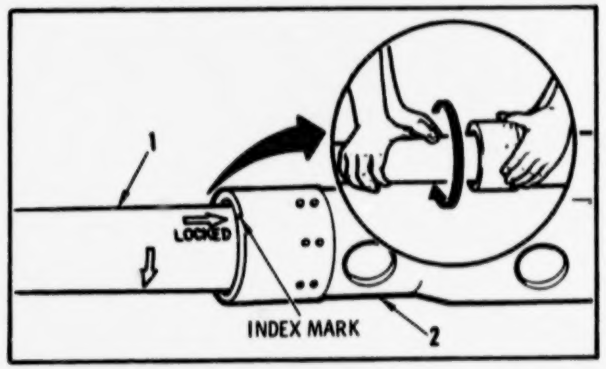
   c. Push the barrel (1) all the way into barrel support (2) until it stops.



   d. Rotate barrel (1) in the direction of the LOCK arrow until a loud click is heard.

   e. Visually check to see that the LOCKED arrow on barrel (1) is aligned with the index mark on barrel support (2).

   f. Rotate barrel back and forth to make certain barrel (1) is locked into barrel support (2).



2-25. REPAIR BARREL ASSEMBLY 2-25

This task covers: a. Disassembly c. Inspection
b. Cleaning d. Assembly

INITIAL SETUP

Applicable Configurations

All

Tools:

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts:

Dry Cleaning Solvent (D3)
Wiping Rags (D4)
Cotter Pin
12524641 (Fig. 2, Item 2)
Muzzle Brake
12524004 (Fig. 2, Item 3)

Personnel Required:

45T Turret Mechanic

General Safety Instructions:

WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

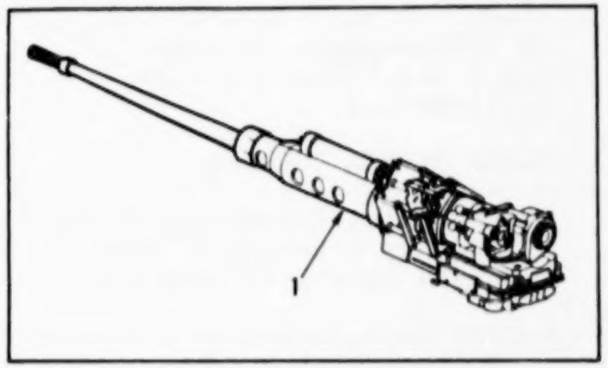
Do not wear jewelry when working on the gun.

Keep your fingers away from moving parts of gun.

DISASSEMBLY

1. **PLACE GUN ASSEMBLY ON A CLEAN FLAT SURFACE.**

   a. Position gun (1) as shown.

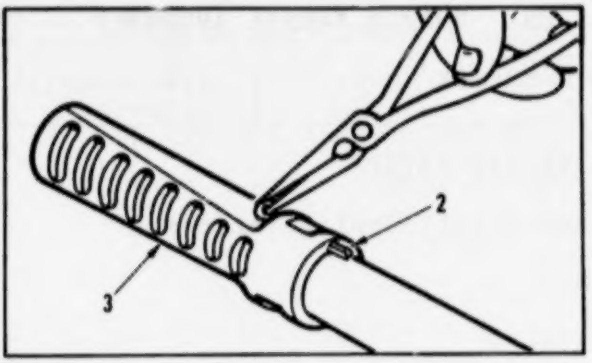


2-25. REPAIR BARREL ASSEMBLY (cont)

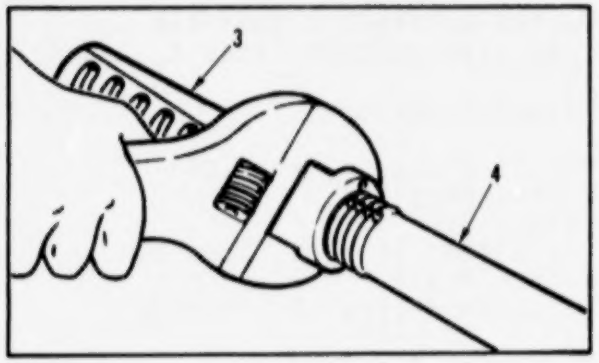
DISASSEMBLY (cont)

2. **REMOVE MUZZLE BRAKE.**

   a. Use round-nose pliers. Remove cotter pin (2) from muzzle brake (3). Discard cotter pin.



   b. Use 15-inch crescent wrench. Unscrew and remove muzzle brake (3) from barrel (4). Discard muzzle brake.



CLEANING

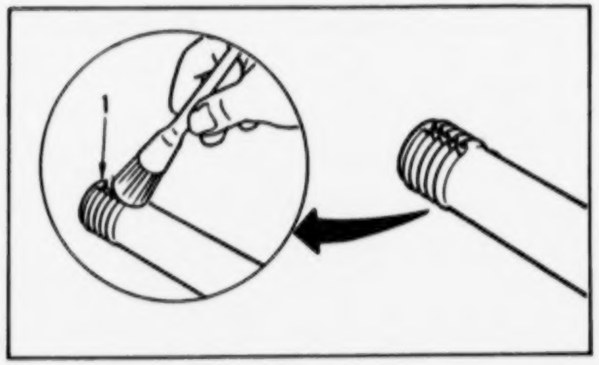
WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

1. **CLEAN BARREL THREADS.**

   a. Use paint (cleaning) brush and dry cleaning solvent. Clean barrel threads (1).

   b. Dry barrel threads (1) with a clean wiping rag.



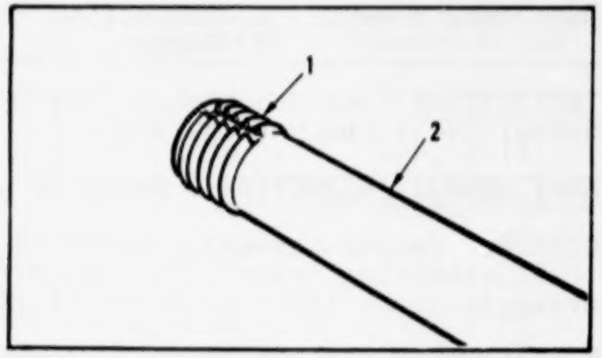
2-25. REPAIR BARREL ASSEMBLY (cont)

INSPECTION

1. **INSPECT BARREL THREADS.**

   a. Visually inspect threads (1) for signs of cross threading.

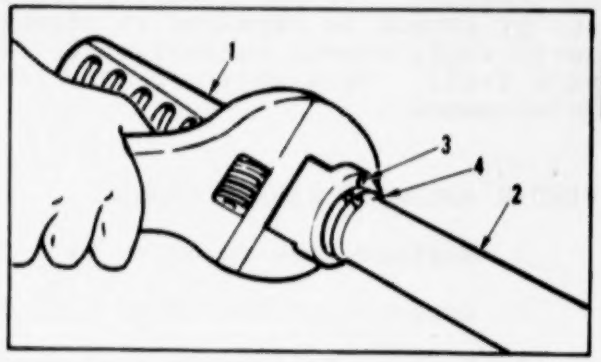
   b. Replace barrel (2) if threads (1) have been damaged by cross threading.



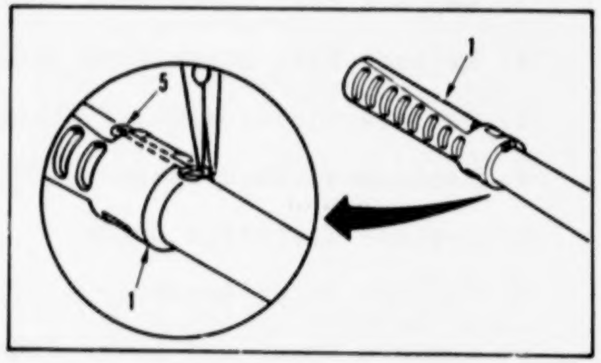
ASSEMBLY

1. **INSTALL MUZZLE BRAKE.**

   a. Use 15-inch crescent wrench. Thread new muzzle brake (1) all the way onto barrel (2). Back off muzzle brake (1) until cotter pin hole (3) is aligned with slot in barrel threads (4).



   b. Use round nose pliers. Install new cotter pin (5) into muzzle brake (1) and bend ends of cotter pin (5) as shown.



2-26. MAINTENANCE OF FEEDER ASSEMBLY 2-26

This task covers: a. Inspection c. Replacement
b. Repair

INSPECTION: See Troubleshooting Symptom Index (para 2-7) and Feeder Manual Cycle Check (para 2-9).

SEMI-ANNUAL INSPECTION: Refer to gun semi-annual inspection (para 2-6).

REPAIR: Feeder assembly repair is indicated by inspection or troubleshooting (para 2-7). Repair of the feeder assembly at the organizational level consists of the tasks listed below.

REPLACEMENT: If the feeder assembly is damaged or unserviceable, and it cannot be repaired at organizational level, replace with a serviceable feeder assembly. For replacement instructions (see para 2-27). Send unserviceable feeder assembly to Direct Support Maintenance.

FEEDER ASSEMBLY REPAIR TASKS:	TASK PARAGRAPH	TROUBLESHOOTING PARAGRAPH REF
1. Replace Forward Upper Link Stripper	2-28	2-9, 2-14
2. Replace Forward Lower Link Stripper	2-29	2-9, 2-14
3. Replace Rear Upper Link Stripper	2-30	2-9, 2-14
4. Replace Rear Lower Link Stripper	2-31	2-9, 2-14
5. Replace Ejection Chute Assembly	2-32	2-14
6. Replace Forward Feeder Gate	2-33	2-9, 2-14
7. Replace Cartridge Guide	2-34	2-9, 2-14
8. Replace Rotor Assembly	2-35	2-9, 2-14
9. Replace Upper and Lower Feed Sprocket Assemblies	2-36	2-9, 2-14
10. Replace Feeder Standoff	2-37	2-11
11. Replace Stepped Spacers	2-38	2-11

2-26. MAINTENANCE OF FEEDER ASSEMBLY (cont) 2-26

FEEDER ASSEMBLY REPAIR TASKS:	TASK PARAGRAPH	TROUBLESHOOTING PARAGRAPH REF
12. Replace Upper Eject Guide	2-39	2-9, 2-14
13. Replace Link Shield	2-40	2-9, 2-14
14. Repair Lock Handle Assembly	2-41	2-17, 2-19
15. Replace Forward Feed Assembly	2-42	2-11
16. Remove/Install Round Positioner Assembly	2-43	2-9, 2-14
17. Repair Round Positioner Assembly	2-44	2-9, 2-14

MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-27. REPLACE FEEDER ASSEMBLY 2-27

This task covers:
a. Removal
b. Inspection
c. Installation
d. Operational Check

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)
Hand Crank
12524015 (Item 5, App B)

Materials/Parts

Feeder Assembly
12524100 (Fig. 1, Item 2, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-8	Electrical checkout
2-9	Feeder manual cycle check
2-14	Gun stalls
2-17	Gun fires intermittently

General Safety Instructions

WARNING

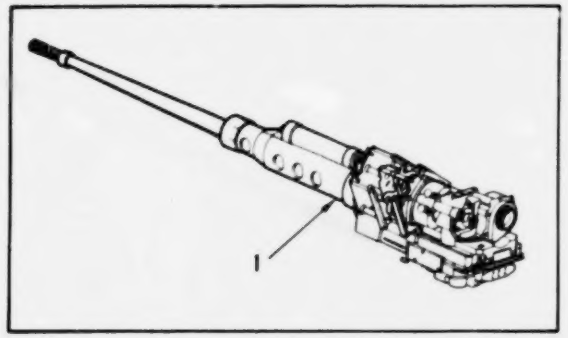
Do not wear jewelry when working on the gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **PLACE GUN ASSEMBLY ON A CLEAN FLAT SURFACE.**

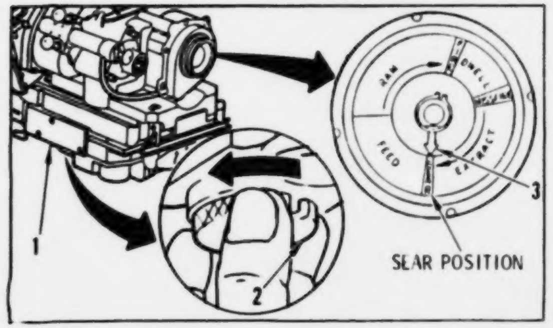
   a. Position gun (1) as shown.



2. **LOCK GUN ASSEMBLY IN SEAR POSITION.**

   a. Rotate drive shaft (2) counterclockwise until gun stops and becomes locked.

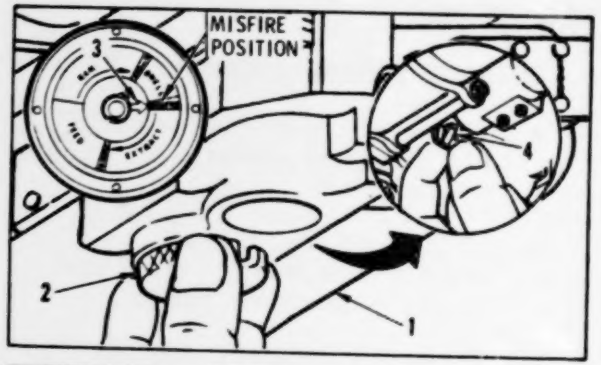
   b. Visually check bolt position indiator (3) to verify gun (1) is locked in SEAR position.



2-27. REPLACE FEEDER ASSEMBLY (cont) 2-27

REMOVAL (cont)

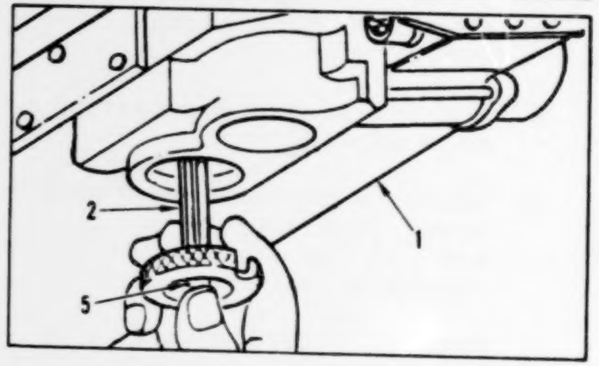
   c. If gun (1) locks and bolt position indicator (3) points to MISFIRE, pull in sear release link (4) and continue to rotate drive shaft (2). After two revolutions of drive shaft (2), release sear release link (4).



   d. Continue rotating drive shaft (2) until gun (1) locks and bolt position indicator (3) points to SEAR position.

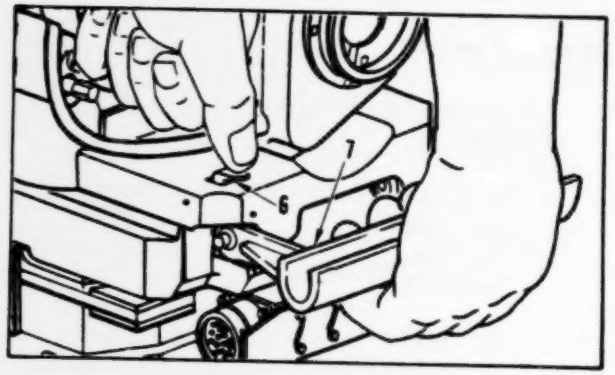
2. **LOWER DRIVE SHAFT.**

   a. Press release button (5) and lower shaft (2).



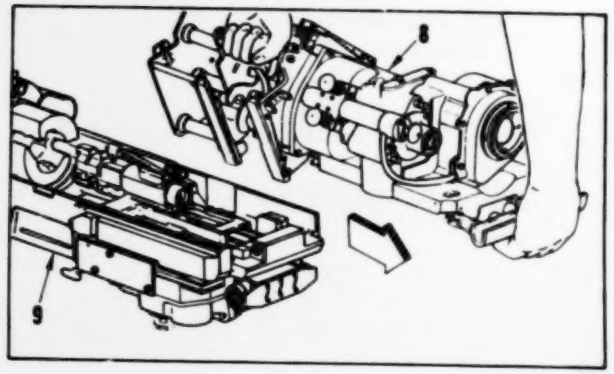
3. **UNLOCK FEEDER ASSEMBLY.**

   a. Press down on feeder handle latch (6) and rotate feeder handle (7) upwards.



4. **REMOVE FEEDER ASSEMBLY.**

   a. Slide feeder assembly (8) to the rear and lift off receiver assembly (9).



2-27. REPLACE FEEDER ASSEMBLY (cont) 2-27

INSPECTION

1. **INSPECT FEEDER ASSEMBLY.**

   a. Visually inspect feeder (1) for cracked, bent, or broken parts.

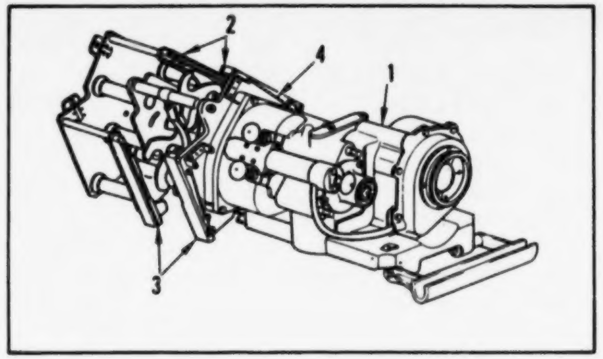
   b. If any of the above conditions exist, replace those defective parts.

   c. Visually inspect feeder (1) for loose or missing hardware.

   d. Tighten or replace hardware as needed.

   e. Visually inspect upper and lower link strippers (2) and (3) for installed safety wire (4).

   f. Replace safety wire (4) if missing.



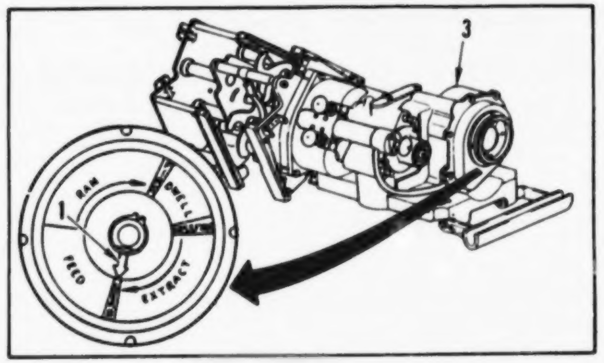
INSTALLATION

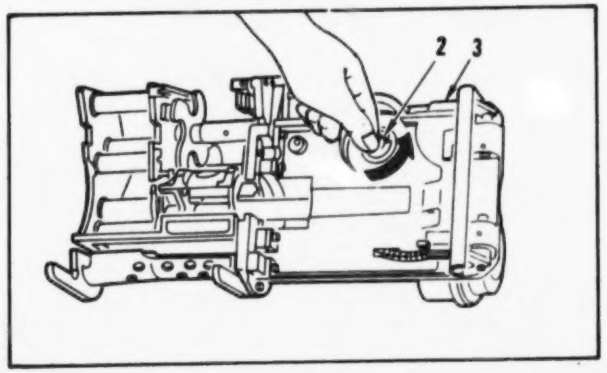
1. **LOCK FEEDER ASSEMBLY IN SEAR POSITION.**

   a. Visually check bolt position indicator (1) to verify it is pointing to SEAR position.

   b. If bolt position indicator (1) does not point to SEAR, rotate worm gear nut (2) counterclockwise.

   c. Rotate worm gear nut (2) until feeder (3) locks and bolt position indicator (1) points to SEAR position.





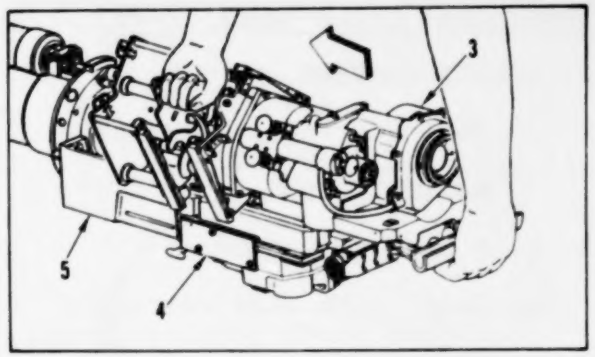
2-27. REPLACE FEEDER ASSEMBLY (cont) 2-27

INSTALLATION (cont)

2. **INSTALL FEEDER ASSEMBLY.**

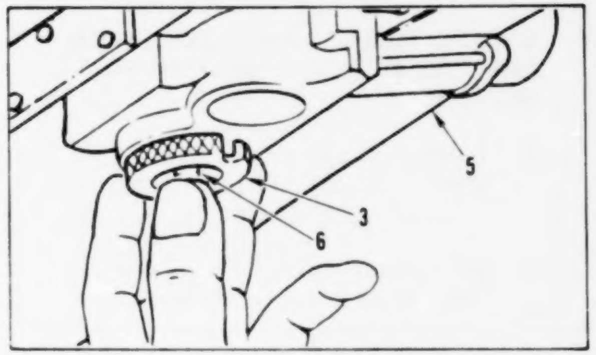
   a. Position feeder (3) onto receiver guide rails (4).

   b. Slide feeder (3) forward until it rests firmly against end of receiver (5).



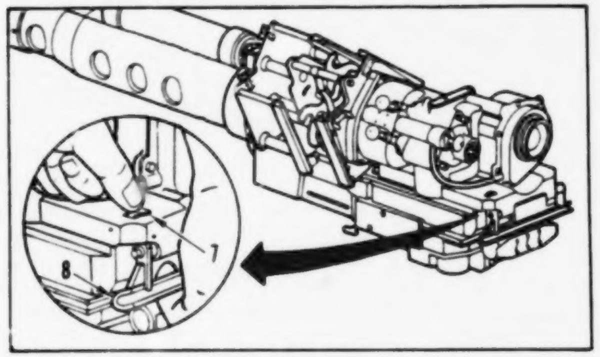
3. **RAISE DRIVE SHAFT.**

   a. Press release button (6) and fully insert slot (3) into receiver (5).



4. **LOCK FEEDER ASSEMBLY.**

   a. Press down on feeder handle latch (7) and rotate feeder handle (8) downward.

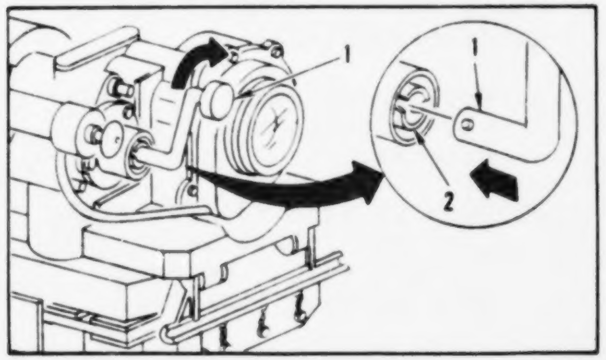


FUNCTIONAL CYCLE CHECK

1. **INSTALL HAND CRANK ON FEEDER ASSEMBLY.**

   a. Insert hand crank (1) into manual drive gear (2) as shown.

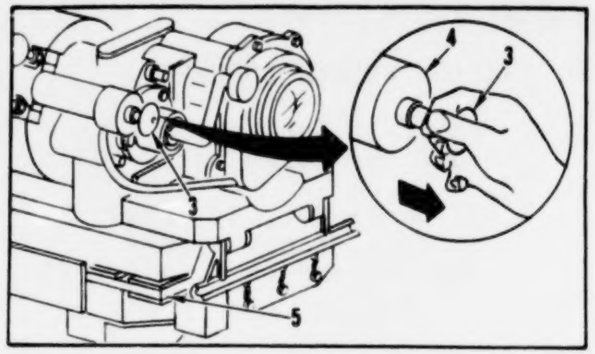
   b. Rotate hand crank (1) clockwise to lock it into manual drive gear (2).



MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-27. REPLACE FEEDER ASSEMBLY (cont) 2-27

FUNCTIONAL CYCLE CHECK (cont)

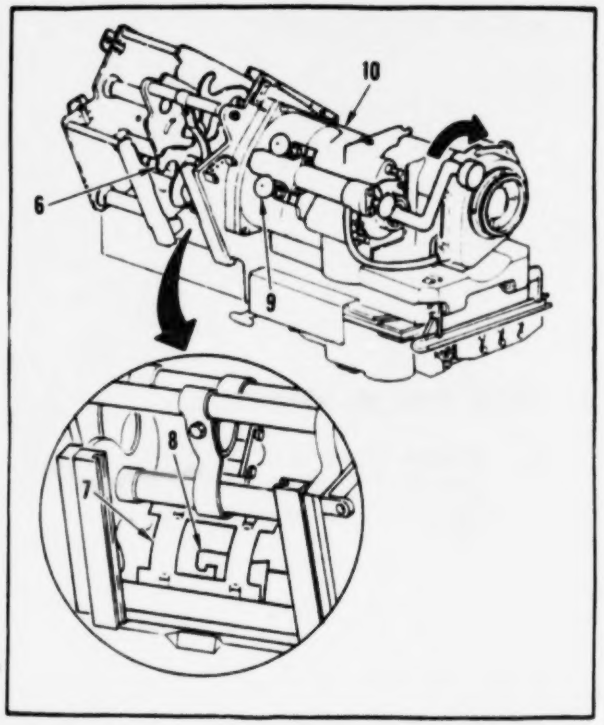


2. **SELECT HE FEED.**

   a. Pull out feed select knob (3) on feed select solenoid (4).

3. **LOCK SEAR RETRACTOR.**

   a. Push in on sear retractor (5) as shown until it locks into place.



4. **ROTATE HAND CRANK CLOCKWISE AND OBSERVE THE FOLLOWING ACTIONS.**

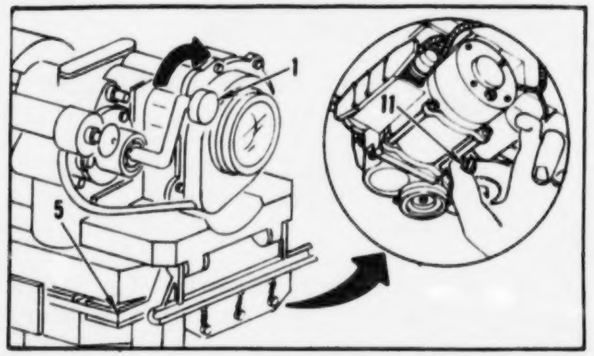
   a. Lower feed sprocket (6) rotates and rotor assembly (7) rotates 1/3 turn.

   b. Bolt and carrier assembly (8) moves in a forward direction.

   c. Lower feed stop (9) moves out.

   d. Feeder assembly (10) stops and locks in MISFIRE position.

   e. If any of the above actions do not occur, perform feeder manual cycle check (para 2-9).



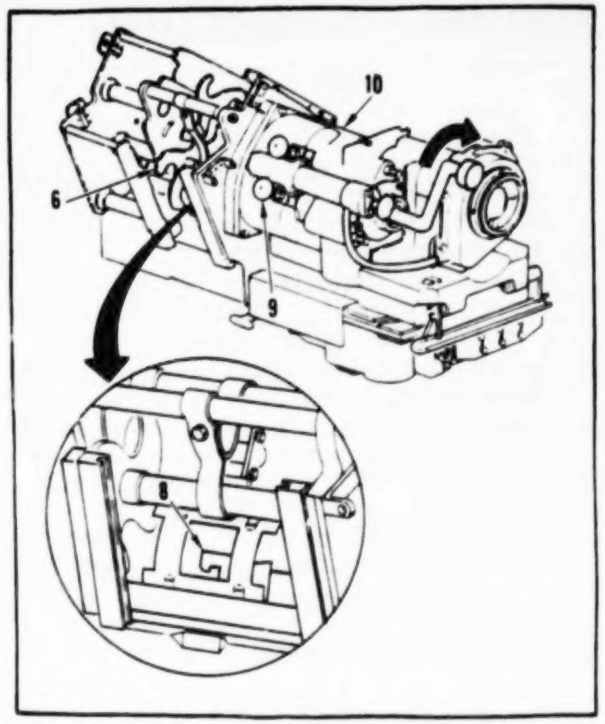
5. **CYCLE FEEDER ASSEMBLY OUT OF MISFIRE POSITION.**

   a. Push in on sear retractor (5) as shown until it unlocks.

   b. Push in sear release link (11) and rotate hand crank (1) 1/2 turn. Release sear release link (11).

2-27. REPLACE FEEDER ASSEMBLY (cont) 2-27

FUNCTIONAL CYCLE CHECK (cont)



6. **ROTATE HANDCRANK CLOCKWISE AND OBSERVE THE FOLLOWING ACTIONS.**

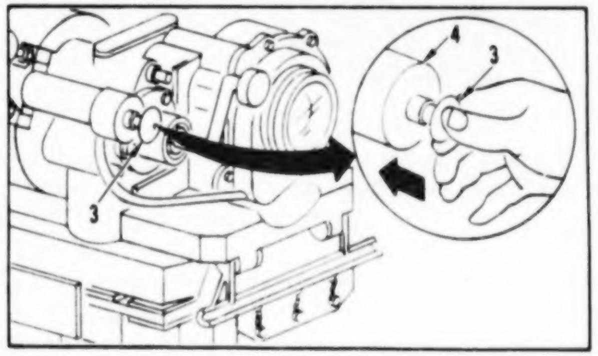
   a. Lower feed sprocket (6) rotates.

   b. Bolt and carrier assembly (8) moves in rearward direction.

   c. Lower fed stop (9) snaps into locked position.

   d. Feeder assembly (10) stops and locks in SEAR position.

   e. If any of the above actions do not occur, perform feeder manual cycle check (para 2-9).



7. **SELECT AP FEED.**

   a. Push feed select knob (3) into feed select solenoid (4).

MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-27. REPLACE FEEDER ASSEMBLY (cont) 2-27

FUNCTIONAL CYCLE CHECK (cont)

NOTE

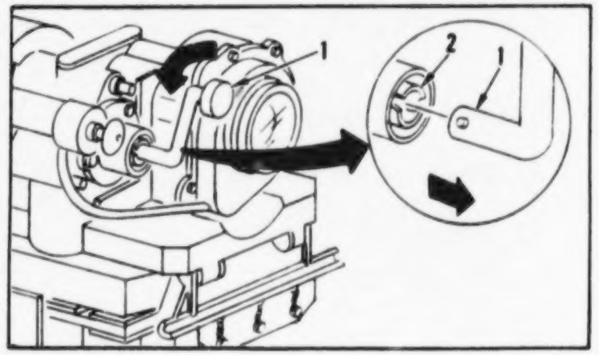
The functional cycle check in AP will be identical to the functional check in HE except for feed sprocket and feed stop movement. When in AP, the upper feed sprocket and upper feed stop will operate.

8. **REPEAT FUNCTIONAL CYCLE CHECK WITH AP SELECTED.**

   a. Repeat functional cycle check, steps 3 through 6.

9. **REMOVE HAND CRANK.**

   a. Rotate hand crank (1) counterclockwise and pull out of manual drive gear (2).



2-28. REPLACE FORWARD UPPER LINK STRIPPER 2-28

This task covers: a. Removal c. Installation
b. Inspection

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Forward Upper Link Stripper 12524066 (Fig. 3, Item 6, App C)
0.032-Inch Lock Wire (D1)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions:

2-27 Feeder assembly removed from gun

General Safety Instructions

WARNING

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

Place feeder lock handle in down position to protect electrical connector on bottom of feeder assembly.

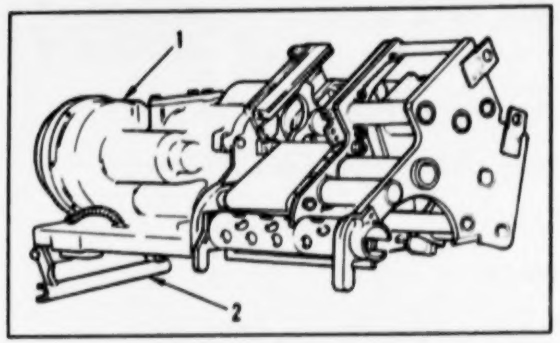
Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

2-28. REPLACE FORWARD UPPER LINK STRIPPER (cont) 2-28

REMOVAL

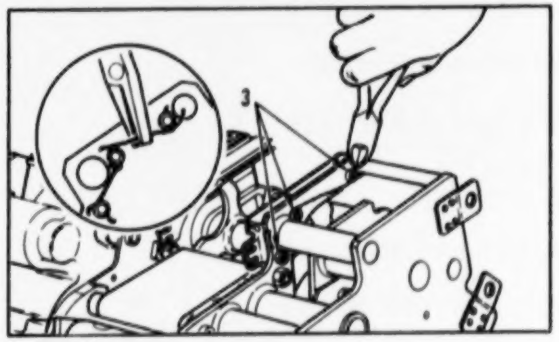
1. **PLACE FEEDER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position feeder (1) with feeder handle (2) down as shown.



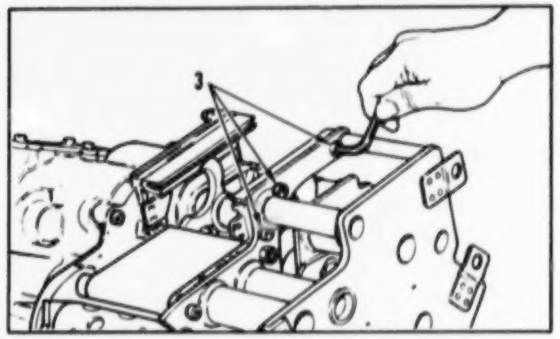
2. **REMOVE LOCK WIRE FROM FORWARD UPPER LINK STRIPPER SOCKET HEAD CAP SCREWS.**

   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from three socket head cap screws (3).



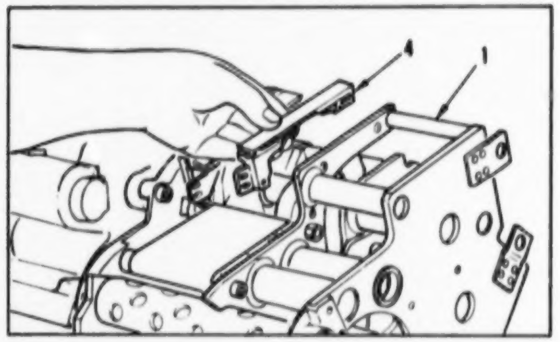
3. **REMOVE SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Remove three socket head cap screws (3).



4. **REMOVE FORWARD UPPER LINK STRIPPER.**

   a. Lift link stripper (4) from feeder (1).



2-28. REPLACE FORWARD UPPER LINK STRIPPER (cont) 2-28

INSPECTION

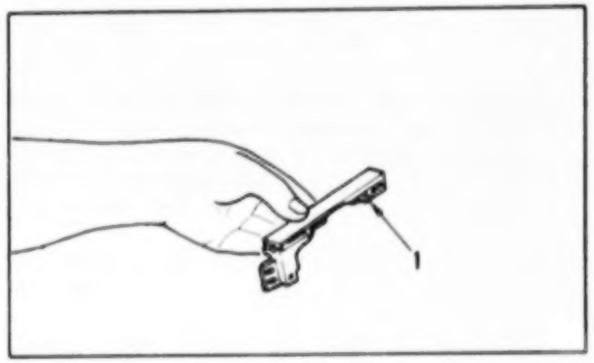
NOTE

Remove any preservative coating from link stripper before inspection.

1. **INSPECT FORWARD UPPER LINK STRIPPER.**

   a. Visually inspect link stripper (1) for chips, cracks, or bends.

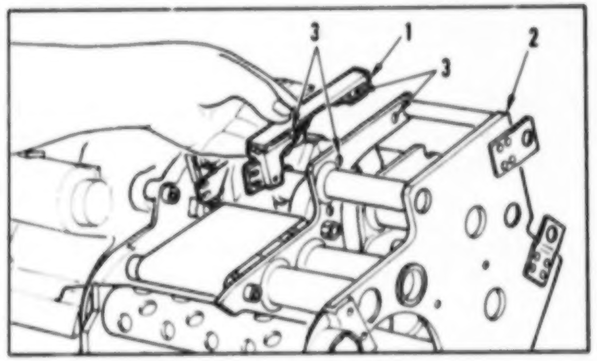
   b. Get a new link stripper if any of above conditions are found. Repeat steps a and b.



INSTALLATION

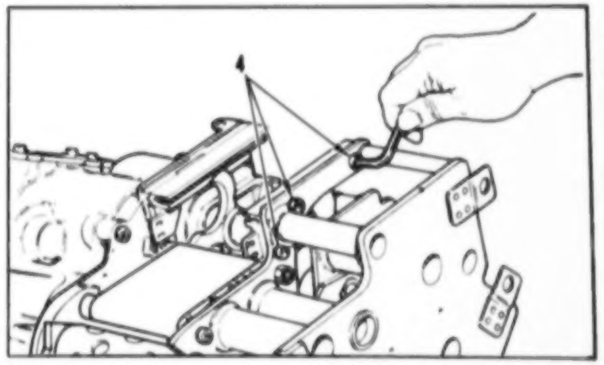
1. **INSTALL FORWARD UPPER LINK STRIPPER.**

   a. Place link stripper (1) on feeder (2). Aline mounting holes (3).



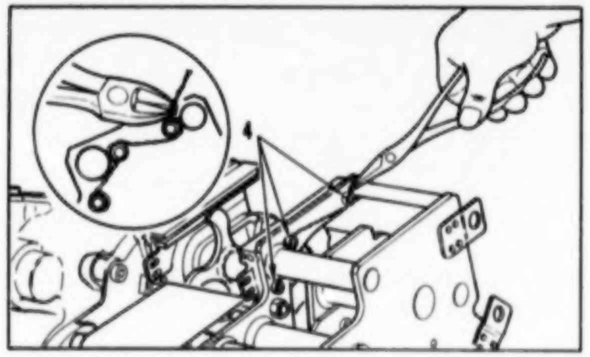
2. **INSTALL SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Install and tighten three socket head cap screws (4).



2-28. REPLACE FORWARD UPPER LINK STRIPPER (cont) 2-28

INSTALLATION (cont)



3. **INSTALL LOCK WIRE ON SOCKET HEAD CAP SCREWS.**

   a. Use duckbill pliers and diagonal-cutting pliers. Lockwire three socket head cap screws (4).

NOTE

FOLLOW-ON MAINTENANCE: Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-29. REPLACE FORWARD LOWER LINK STRIPPER 2-29

This task covers: a. Removal c. Installation
b. Inspection

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Forward Lower Link Stripper 12524067 (Fig. 3, Item 15, App C)
0.032-Inch Lock Wire (D1)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions:

2-27 Feeder assembly removed from gun

General Safety Instructions

WARNING

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

Place feeder lock handle in down position to protect electrical connector on bottom of feeder assembly.

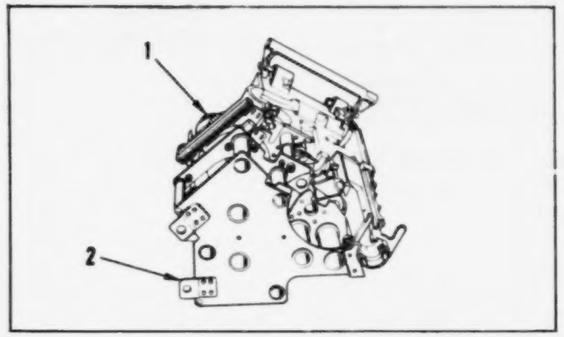
Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

2-29. REPLACE FORWARD LOWER LINK STRIPPER (cont) 2-29

REMOVAL

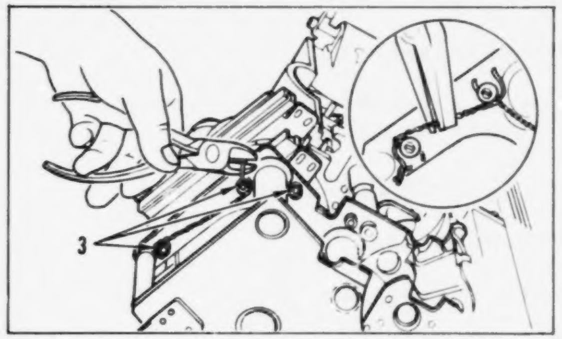
1. **PLACE FEEDER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position feeder assembly (1) with feed chute bracket (2) on bottom as shown.



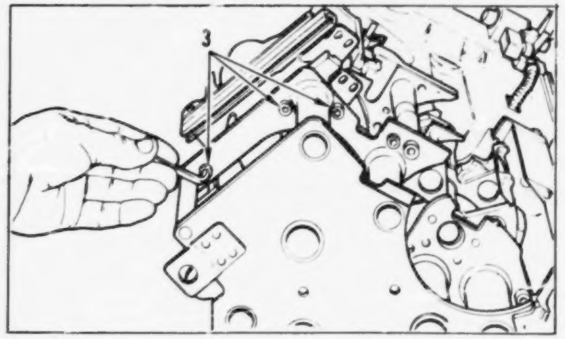
2. **REMOVE LOCK WIRE FROM FORWARD LOWER LINK STRIPPER SOCKET HEAD CAP SCREWS.**

   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from three socket head cap screws (3).



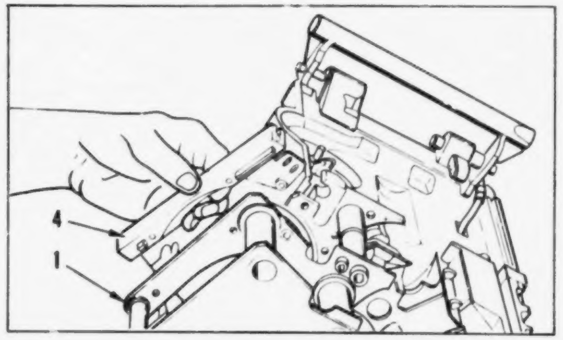
3. **REMOVE SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Remove three socket head cap screws (3).



4. **REMOVE FORWARD LOWER LINK STRIPPER.**

   a. Lift link stripper (4) away from feeder (1).



2-29. REPLACE FORWARD LOWER LINK STRIPPER (cont) 2-29

INSPECTION

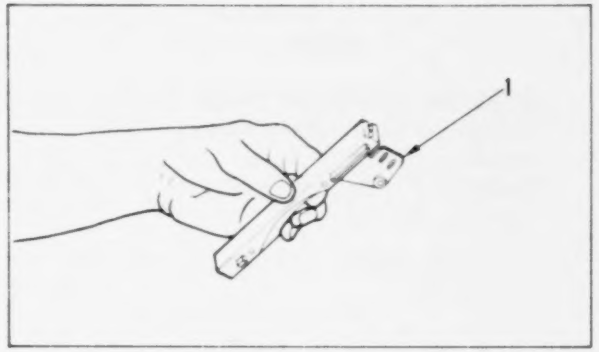
NOTE

Remove any preservative coating from link stripper before inspection.

1. **INSPECT FORWARD LOWER LINK STRIPPER.**

   a. Visually inspect link stripper (1) for chips, cracks, and bends.

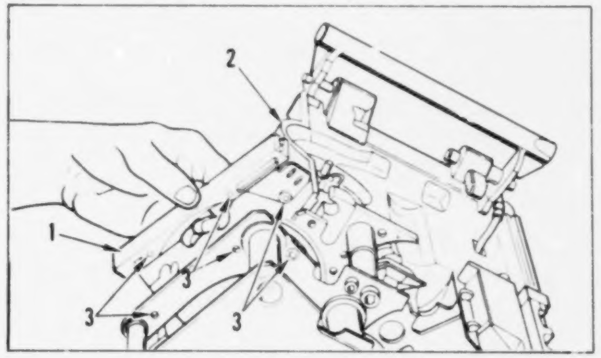
   b. Get a new link stripper if any of above conditions are found. Repeat steps a and b.



INSTALLATION

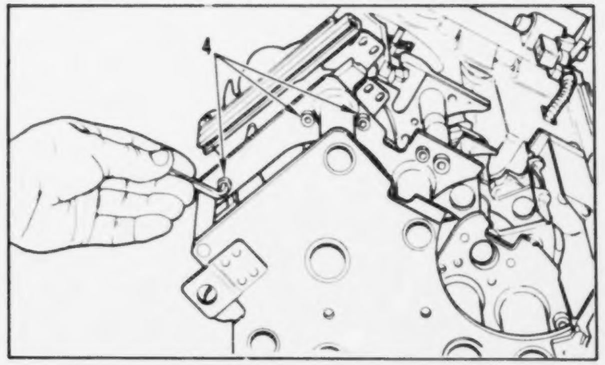
1. **INSTALL FORWARD LOWER LINK STRIPPER.**

   a. Position link stripper (1) on feeder assembly (2). Aline mounting holes (3).



2. **INSTALL SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Install and tighten three socket head cap screws (4).

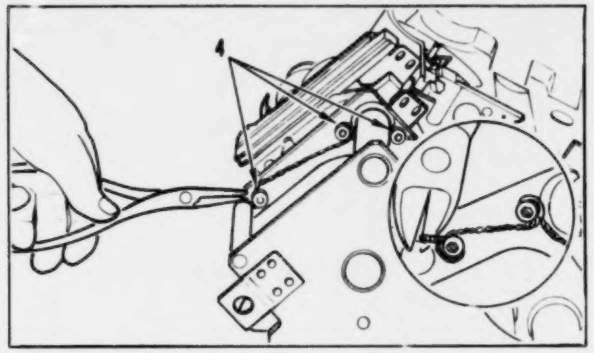


2-29. REPLACE FORWARD LOWER LINK STRIPPER (cont) 2-29

INSTALLATION (cont)

3. **INSTALL LOCK WIRE ON SOCKET HEAD CAP SCREWS.**

   a. Use duckbill pliers and diagonal-cutting pliers. Lockwire three cap screws (4).



NOTE

FOLLOW-ON MAINTENANCE: Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-30. REPLACE REAR UPPER LINK STRIPPER 2-30

This task covers: a. Removal c. Installation
b. Inspection

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

0.032-Inch Lock Wire (D1)
Rear Upper Link Stripper 12524065 (Fig. 3, Item 20, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9	Feeder manual cycle check
2-14	Gun stalls

Equipment Conditions:

2-27	Feeder assembly removed from gun

General Safety Instructions

WARNING

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

Place feeder lock handle in down position to protect electrical connector on bottom of feeder assembly.

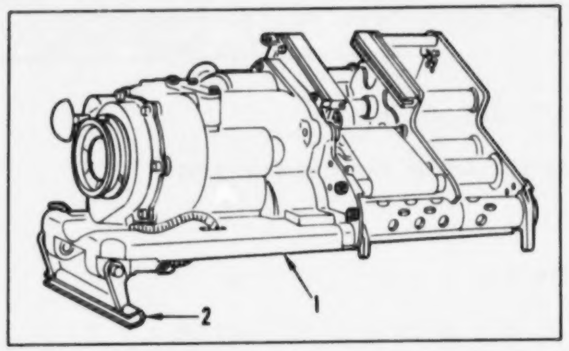
Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

2-30. REPLACE REAR UPPER LINK STRIPPER (cont) 2-30

REMOVAL

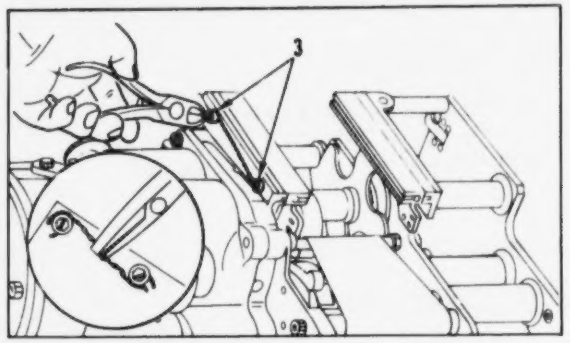
1. **PLACE FEEDER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position feeder (1) with feeder handle (2) down as shown.



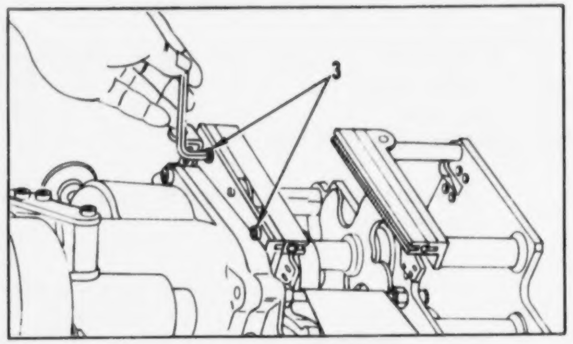
2. **REMOVE LOCK WIRE FROM REAR UPPER LINK STRIPPER SOCKET HEAD CAP SCREWS.**

   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from two socket head cap screws (3).



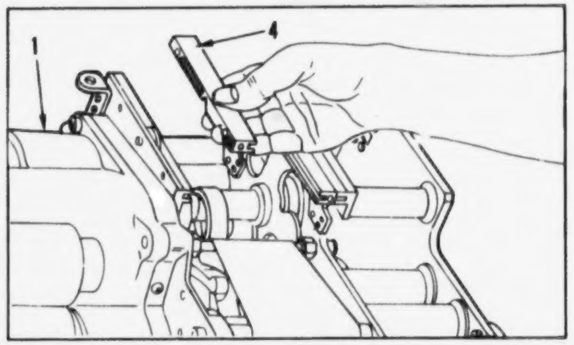
3. **REMOVE SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Remove two socket head cap screws (3).



4. **REMOVE REAR UPPER LINK STRIPPER.**

   a. Lift link stripper (4) away from feeder (1).



2-30. REPLACE REAR UPPER LINK STRIPPER (cont) 2-30

INSPECTION

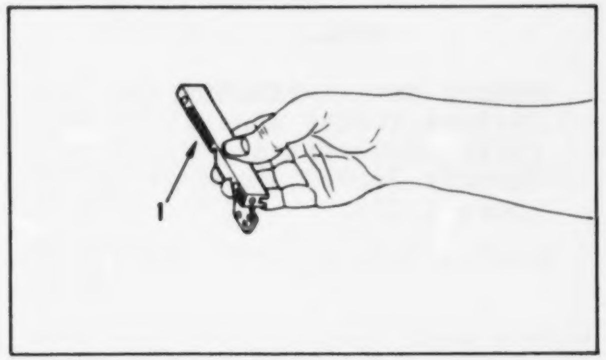
NOTE

Remove any preservative coating from link stripper before inspection.

1. **INSPECT REAR UPPER LINK STRIPPER.**

   a. Visually inspect link stripper (1) for chips, cracks, or bends.

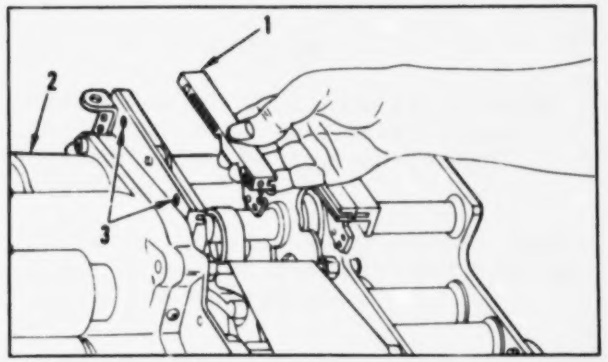
   b. Get a new link stripper if any of above conditions are found. Repeat steps a and b.



INSTALLATION

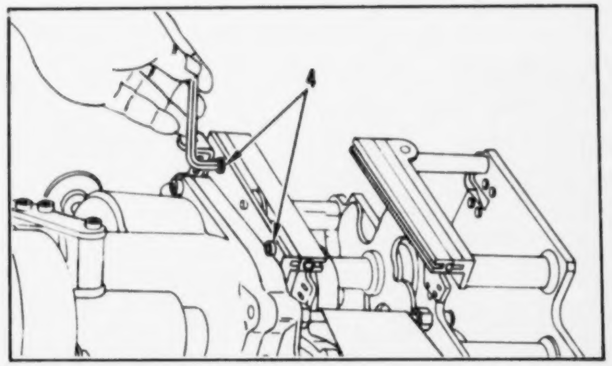
1. **INSTALL REAR UPPER LINK STRIPPER.**

   a. Position link stripper (1) on feeder (2). Aline mounting holes (3).



2. **INSTALL SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Install and tighten two socket head cap screws (4).

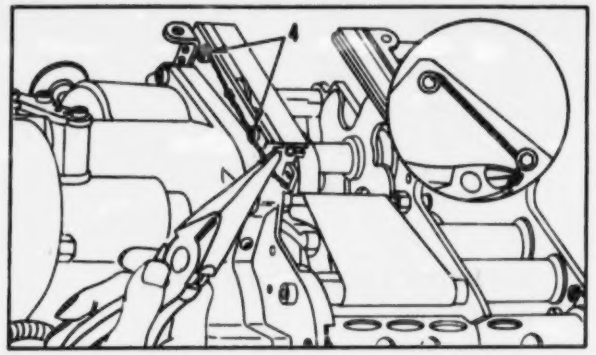


2-30. REPLACE REAR UPPER LINK STRIPPER (cont) 2-30

INSTALLATION (cont)

3. **INSTALL LOCK WIRE ON SOCKET HEAD CAP SCREWS.**

   a. Use duckbill pliers and diagonal-cutting pliers. Lockwire two socket head cap screws (4).



NOTE

FOLLOW-ON MAINTENANCE:
Perform feeder manual cycle check (para 2-9).
Install feeder assembly (para 2-27).

2-31. REPLACE REAR LOWER LINK STRIPPER 2-31

This task covers: a. Removal b. Inspection c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

0.032-Inch Lock Wire (D1)
Rear Lower Link Stripper
12524068 (Fig. 3, Item 23, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions:

2-27 Feeder assembly removed from gun

General Safety Instructions

WARNING

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

Place feeder lock handle in down position to protect electrical connector on bottom of feeder assembly.

Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

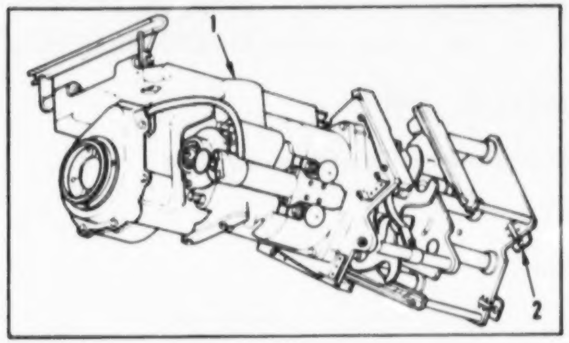
MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-31. REPLACE REAR LOWER LINK STRIPPER (cont) 2-31

REMOVAL

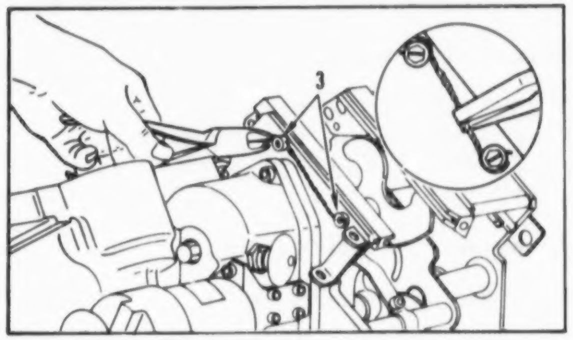
1. **PLACE FEEDER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position feeder (1) with feed chute bracket (2) on bottom as shown.



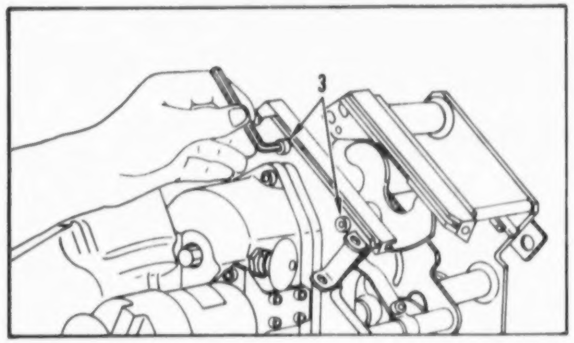
2. **REMOVE LOCK WIRE FROM REAR LOWER LINK STRIPPER SOCKET HEAD CAP SCREWS.**

   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from two socket head cap screws (3).



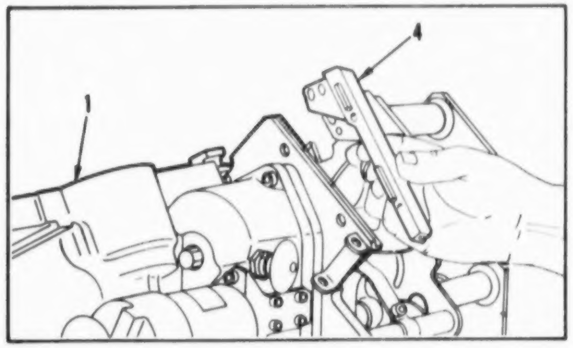
3. **REMOVE SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Remove two socket head cap screws (3).



4. **REMOVE REAR LOWER LINK STRIPPER.**

   a. Lift link stripper (4) away from feeder (1).



2-31. REPLACE REAR LOWER LINK STRIPPER (cont) 2-31

INSPECTION

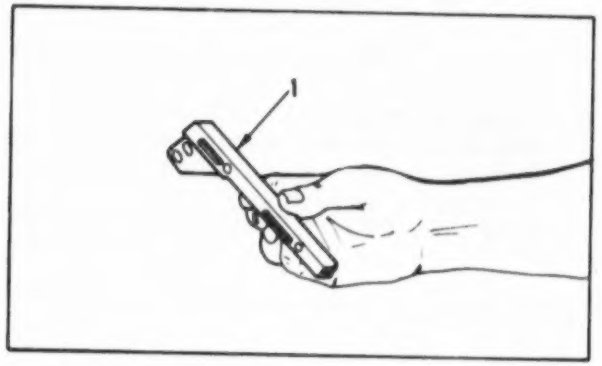
NOTE

Remove any preservative coating from link stripper before inspection.

1. **INSPECT REAR LOWER LINK STRIPPER.**

   a. Visually inspect link stripper (1) for chips, cracks, and bends.

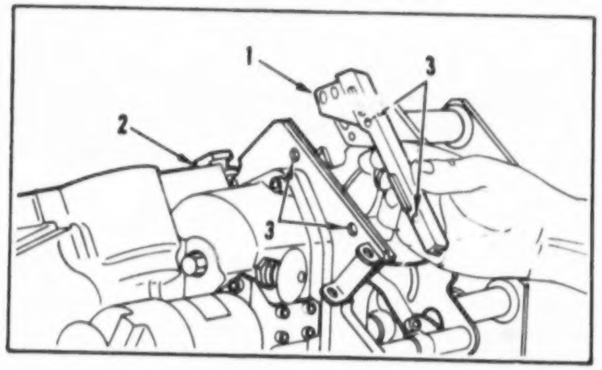
   b. Get a new link stripper if any of above conditions are found. Repeat steps a and b.



INSTALLATION

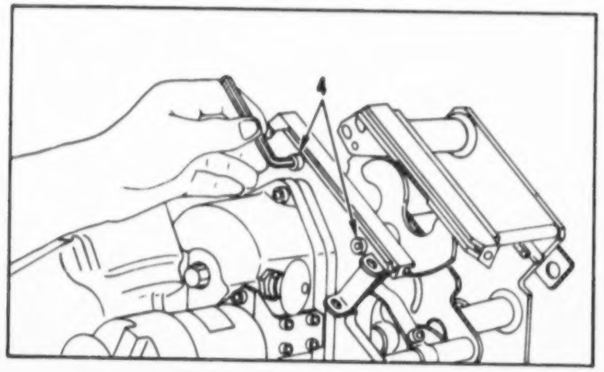
1. **INSTALL REAR LOWER LINK STRIPPER.**

   a. Position link stripper (1) on feeder (2). Aline mounting holes (3).



2. **INSTALL SOCKET HEAD CAP SCREWS.**

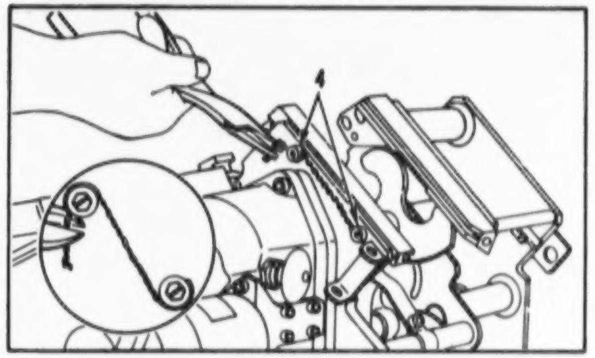
   a. Use 5-mm hex key. Install and tighten two socket head cap screws (4).



MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-31. REPLACE REAR LOWER LINK STRIPPER (cont) 2-31

INSTALLATION (cont)



3. INSTALL LOCK WIRE ON SOCKET HEAD CAP SCREWS.

a. Use duckbill pliers and diagonal-cutting pliers. Lockwire two socket head cap screws (4).

NOTE

FOLLOW-ON MAINTENANCE: Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-32. REPLACE EJECTION CHUTE ASSEMBLY 2-32

This task covers: a. Removal
b. Inspection
c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Ejection Chute Assembly
12524110 (Fig. 3, Item 8, App C)
0.032-Inch Lock Wire (D1)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-14 Gun stalls

Equipment Conditions:

2-27 Feeder assembly removed from gun

General Safety Instructions

WARNING

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

Place feeder lock handle in down position to protect electrical connector on bottom of feeder assembly.

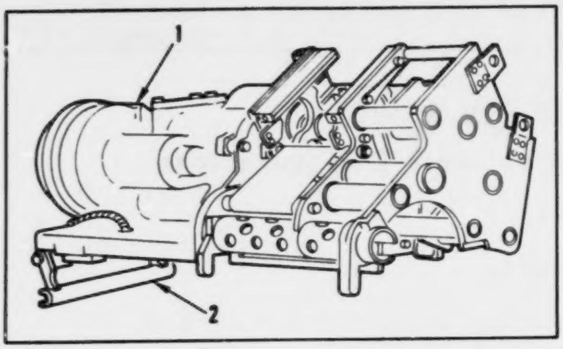
Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

2-32. REPLACE EJECTION CHUTE ASSEMBLY (cont) 2-32

REMOVAL

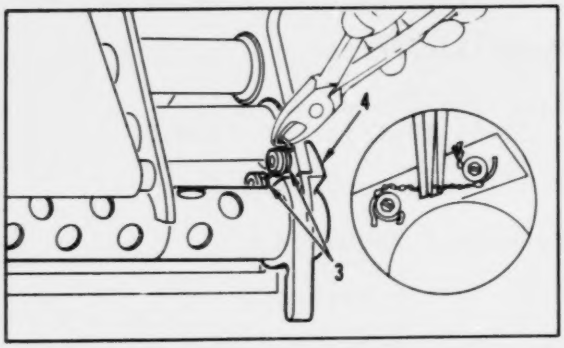
1. **PLACE FEEDER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position feeder assembly (1) with feeder handle (2) down as shown.



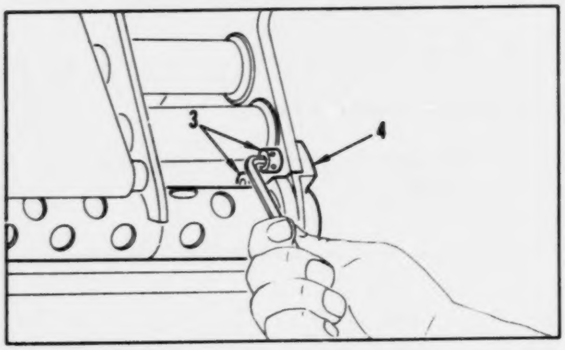
2. **REMOVE LOCK WIRE FROM FORWARD SOCKET HEAD CAP SCREWS.**

   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from two forward socket head cap screws (3) on ejection chute assembly (4).

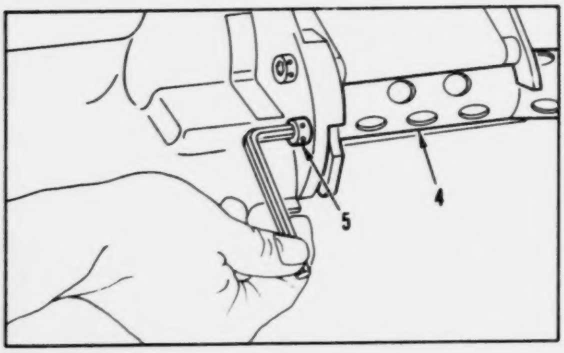


3. **REMOVE REAR UPPER AND FORWARD SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Remove two forward socket head cap screws (3) from ejection chute (4).

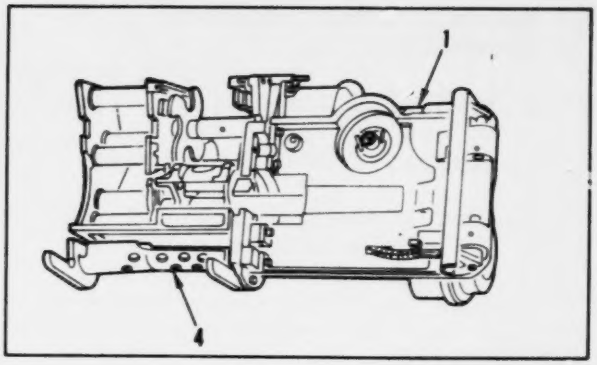


   b. Use 5-mm hex key. Remove rear upper socket head cap screw (5) from ejection chute (4).



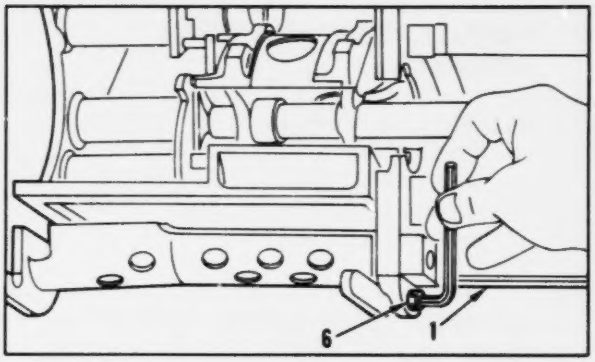
2-32. REPLACE EJECTION CHUTE ASSEMBLY 2-32

REMOVAL (cont)



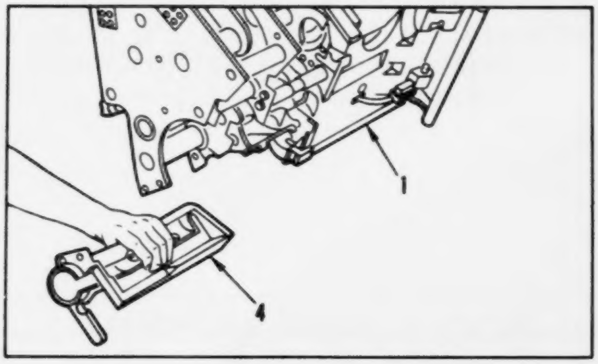
4. **POSITION FEEDER ASSEMBLY.**

   a. Position feeder assembly (1) with ejection chute (4) up as shown.



5. **REMOVE REAR LOWER SOCKET HEAD CAP SCREW.**

   a. Use 5-mm hex key. Remove rear lower socket head cap screw (6) from feeder (1).



6. **REMOVE EJECTION CHUTE ASSEMBLY.**

   a. Pull ejection chute (4) away from feeder (1).

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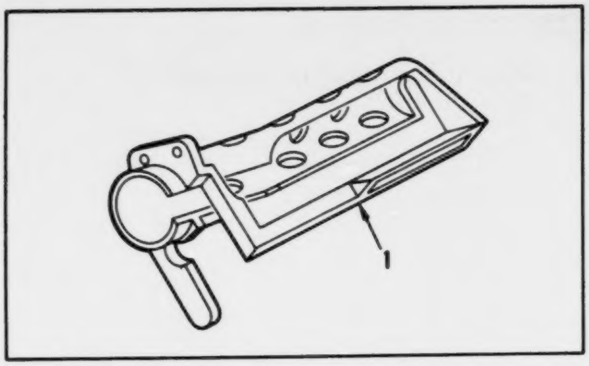
2-32. REPLACE EJECTION CHUTE ASSEMBLY (cont) 2-32

INSPECTION

1. **INSPECT EJECTION CHUTE ASSEMBLY.**

   a. Visually inspect ejection chute assembly (1) for chips, cracks, or bends.

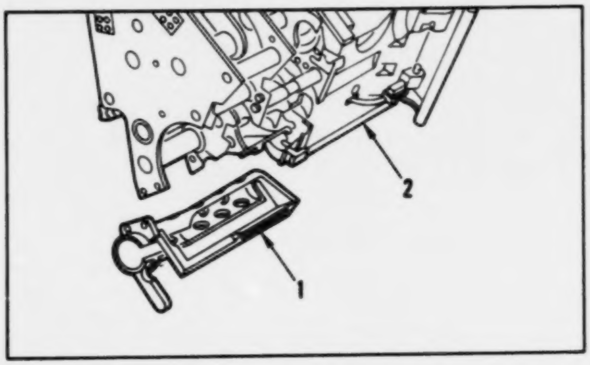
   b. Get a new assembly if any of above conditions are found. Repeat steps a and b.



INSTALLATION

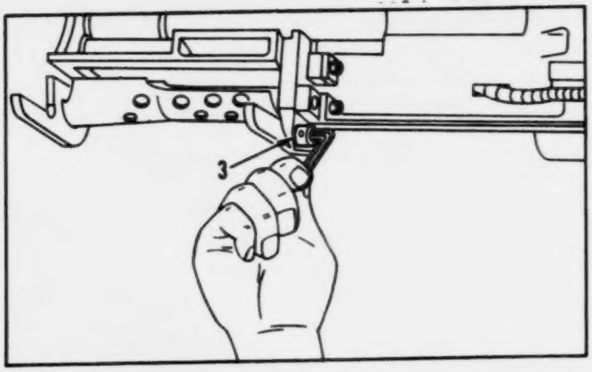
1. **INSTALL EJECTION CHUTE ASSEMBLY.**

   a. Position ejection chute assembly (1) on feeder assembly (2). Aline ejection chute and feeder mounting holes.



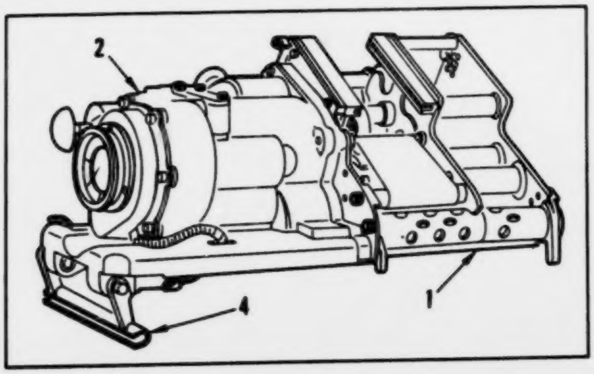
2. **INSTALL REAR LOWER SOCKET HEAD CAP SCREW.**

   a. Use 5-mm hex key. Install rear lower socket head cap screw (3).



3. **POSITION FEEDER ASSEMBLY.**

   a. Position feeder assembly (2) with locking handle (4) down and ejection chute (1) on bottom as shown.

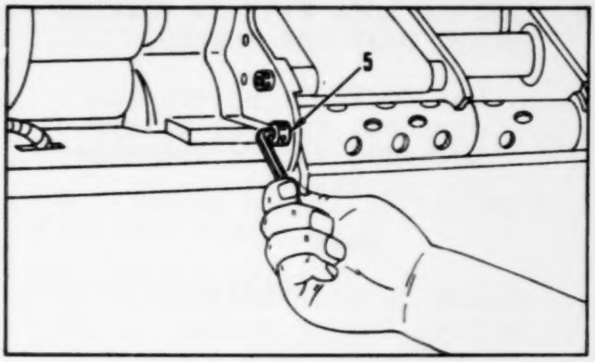


2-32. REPLACE EJECTION CHUTE ASSEMBLY (cont) 2-32

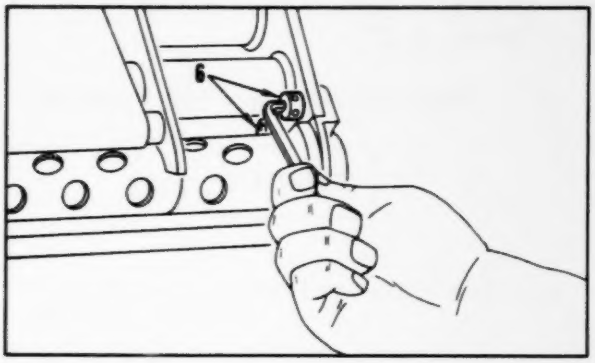
INSTALLATION (cont)

4. **INSTALL REAR UPPER AND FORWARD SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Install rear upper socket head cap screw (5).

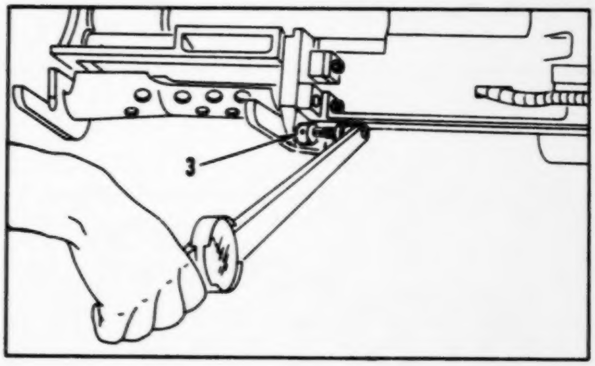


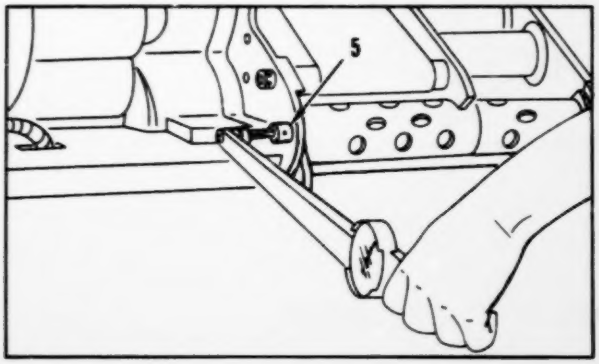
   b. Use 5-mm hex key. Install two forward socket head cap screws (6).



5. **TORQUE TWO REAR SOCKET HEAD CAP SCREWS.**

   a. Use torque wrench and 5-mm socket wrench attachment. Torque two rear socket head cap screws (3) and (5) to 67 in.-lb ±8 in.-lb (77 cmkg ±9 cmkg).

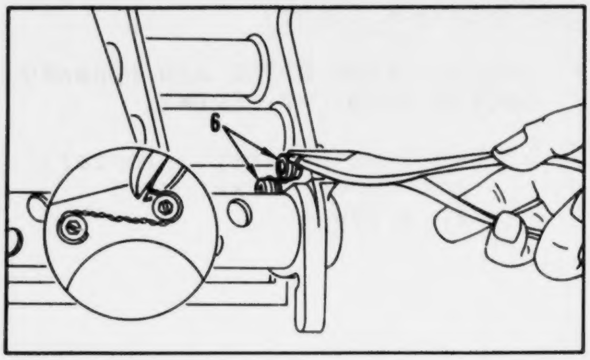




2-32. REPLACE EJECTION CHUTE ASSEMBLY (cont) 2-32

6. **INSTALL LOCK WIRE ON FORWARD SOCKET HEAD CAP SCREWS.**

   a. Use duckbill pliers and diagonal-cutting pliers. Lockwire two socket head cap screws (6).



NOTE

FOLLOW-ON MAINTENANCE: Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-33. REPLACE FORWARD FEEDER GATE ASSEMBLY 2-33

This task covers: a. Removal
b. Inspection
c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Forward Feeder Gate
12524134 (Fig. 3, Item 4, App C)
Forward Gate Spring
12524138 (Fig. 3, Item 3, App C)
Gate Spacer
12524137 (Fig. 3, Item 2, App C)
Self-Locking Nut
12524617-1 (Fig. 3, Item 1, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9	Feeder manual cycle check
2-14	Gun stalls

Equipment Conditions:

2-27	Feeder assembly removed from gun

General Safety Instructions

WARNING

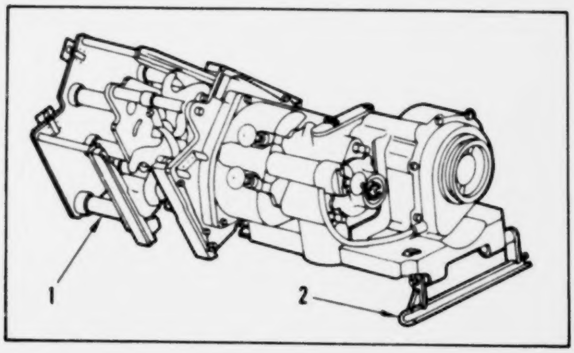
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly (1) on a clean, flat surface with feeder lock handle (2) in down position as shown.



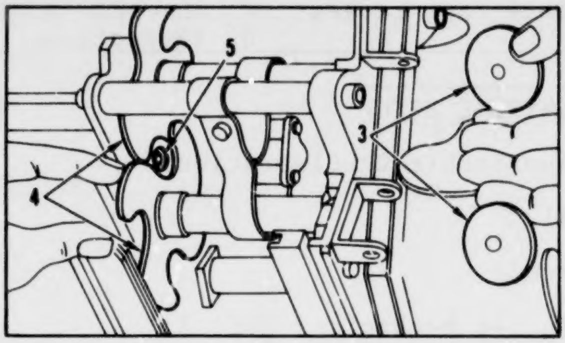
2-33. REPLACE FORWARD FEEDER GATE ASSEMBLY (cont) 2-33

REMOVAL (cont)

2. **GAIN ACCESS TO FEEDER GATE SOCKET HEAD CAP SCREW.**

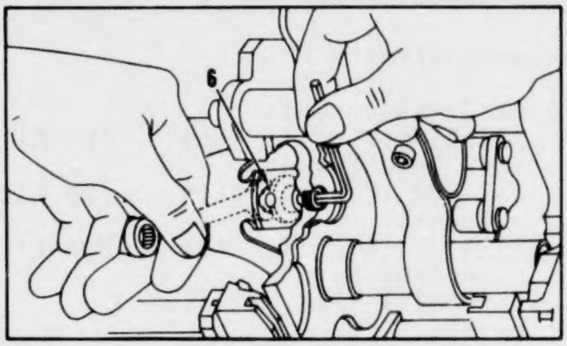
    a. Pull out on both feed shaft stop buttons (3). Hold buttons out until next step is complete.

    b. Turn sprockets (4) until you can see socket head cap screw (5).

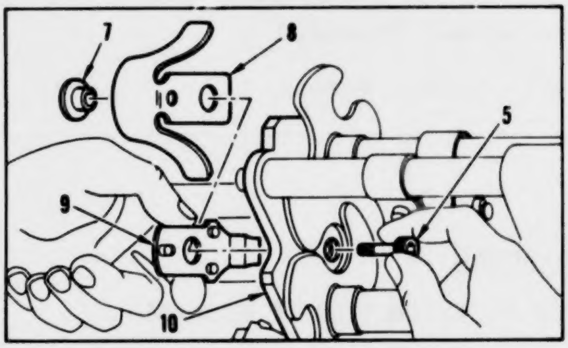


3. **REMOVE FORWARD FEEDER GATE ASSEMBLY.**

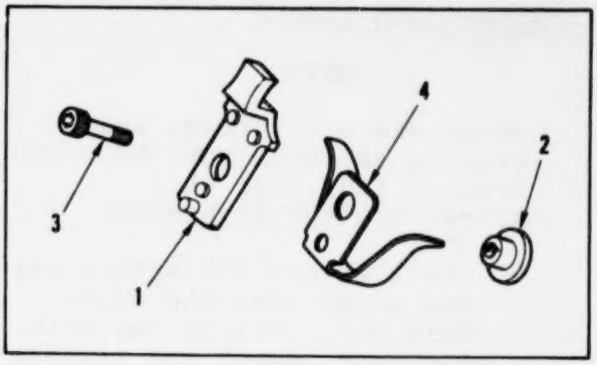
    a. Use 5-mm hex key and 10-mm open-end wrench. Hold self-locking nut (6) with open-end wrench. Remove self-locking nut (6).

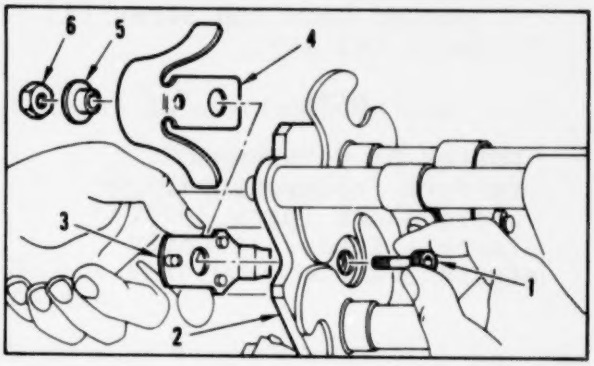


    b. Remove socket head cap screw (5), gate spacer (7), forward gate spring (8), and forward feeder gate (9), from forward feed assembly (10).



2-33. REPLACE FORWARD FEEDER GATE ASSEMBLY (cont) 2-33





INSPECTION

1. **INSPECT FORWARD FEEDER GATE ASSEMBLY PARTS.**

   a. Visually inspect forward feeder gate (1) and gate spacer (2) for bends, breaks, and galls.

   b. Visually inspect socket head cap screw (3) for stripped threads. Inspect forward gate spring (4) for bends and breaks.

   c. If above conditions are found, get new part(s). Repeat steps a, b, and c as required.

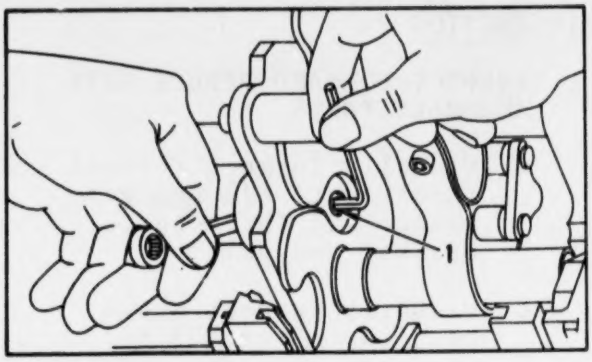
INSTALLATION

1. **INSTALL FORWARD FEEDER GATE ASSEMBLY.**

   a. Install socket head cap screw (1) through forward feed assembly (2) and forward feeder gate (3). Install forward gate spring (4), gate spacer (5), and new self-locking nut (6) on cap screw (1).

2-33. REPLACE FORWARD FEEDER GATE ASSEMBLY (cont) 2-33

INSTALLATION (cont)



NOTE

Screw and nut threads and bearing surfaces must be free of lubricant while screw is being tightened.

b. Use 5-mm hex key attachment and 10-mm open-end wrench. Hold self-locking nut with open-end wrench and tighten socket head cap screw (1) with hex key.

NOTE

FOLLOW-ON MAINTENANCE: Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-34. REPLACE CARTRIDGE GUIDE 2-34

This task covers: a. Removal
b. Inspection
c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Cartridge Guide
12524102 (Fig. 3, Item 14, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions:

2-42 Forward feed assembly removed (Initial Setup and REMOVAL steps ! thru 6)

General Safety Instructions

WARNING

Do not wear jewelry when working on gun.

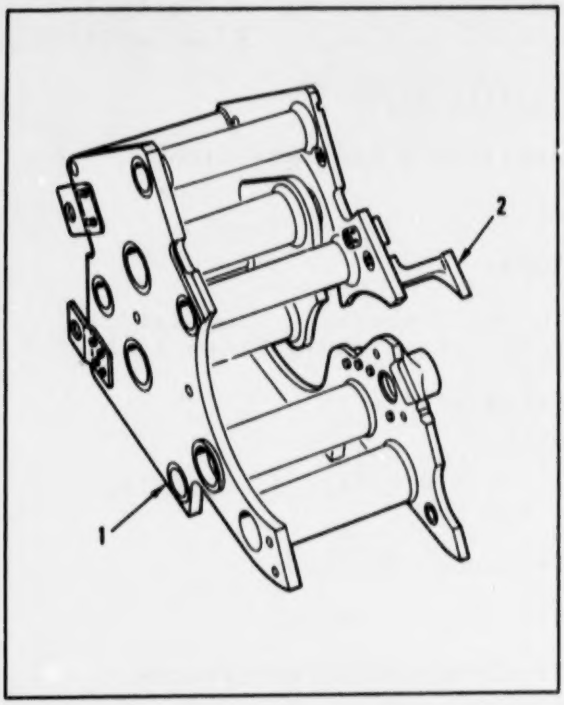
Keep your fingers away from moving parts of gun.

2-34. REPLACE CARTRIDGE GUIDE (cont) 2-34

REMOVAL

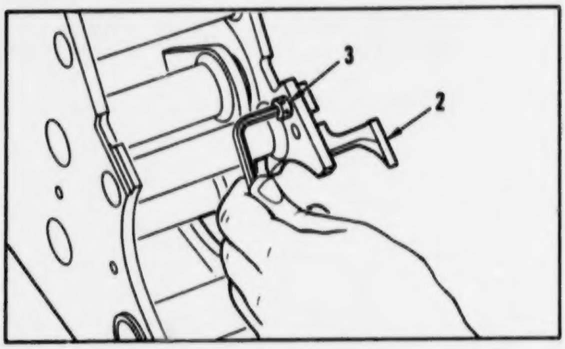
1. **POSITION FORWARD FEED ASSEMBLY.**

   a. Place forward feed assembly (1) on a clean, flat surface, with cartridge guide (2) at top as shown.



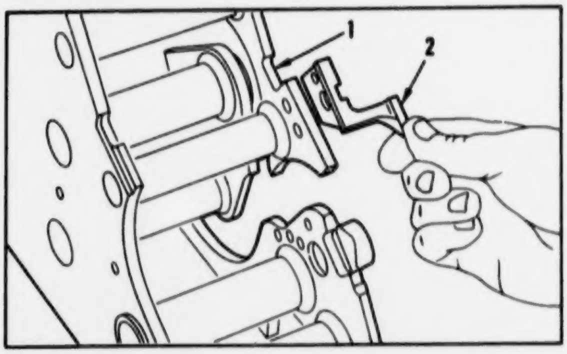
2. **REMOVE CARTRIDGE GUIDE SOCKET HEAD CAP SCREW.**

   a. Use 5-mm hex key. Remove socket head cap screw (3) from cartridge guide (2).



3. **REMOVE CARTRIDGE GUIDE.**

   a. Pull cartridge guide (2) away from forward feed assembly (1).



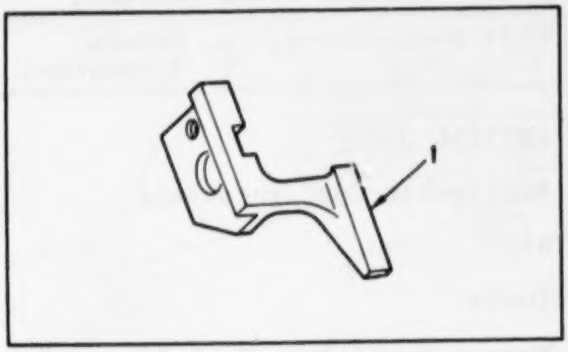
2-34. REPLACE CARTRIDGE GUIDE (cont) 2-34

INSPECTION

1. **INSPECT CARTRIDGE GUIDE.**

   a. Visually inspect cartridge guide (1) for chips, bent guide, and galls.

   b. Get a new part if any of above conditions are found. Repeat steps a and b.

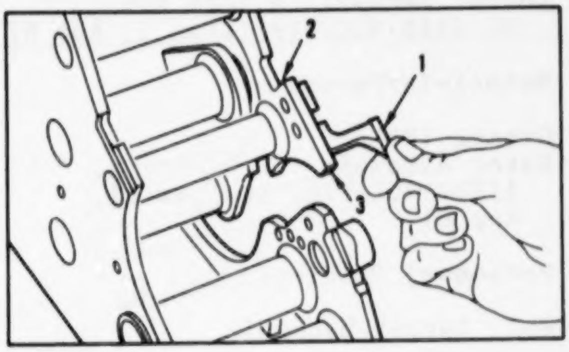


INSTALLATION

1. **INSTALL CARTRIDGE GUIDE.**

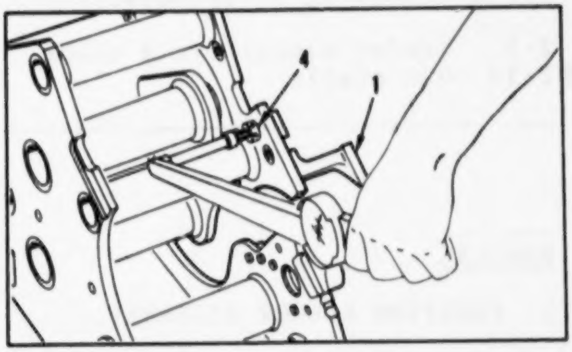
   a. Install cartridge guide (1) in slot (2) of forward feed assembly (3).

   b. Slide cartridge guide (1) in slot (2) until cartridge guide holes aline with holes in forward feed assembly (3).



2. **INSTALL SOCKET HEAD CAP SCREW.**

   a. Use torque wrench, extension, and 5-mm socket wrench attachment. Install socket head cap screw (4) in cartridge guide (1) and torque to 67 in.-lb ±8 in.-lb (77 cmkg ±9 cmkg).



NOTE

FOLLOW-ON MAINTENANCE: Install forward feed assembly (para 2-42, Initial Setup, INSTALLATION, and follow-on maintenance).

MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-35. REPLACE ROTOR ASSEMBLY 2-35

This task covers: a. Removal
b. Inspection
c. Lubrication
d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Rotor Assembly
12524140 (Fig. 3, Item 17, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions:

2-42 Forward feed assembly removed (Initial Setup and REMOVAL steps 1 thru 6).

General Safety Instructions

WARNING

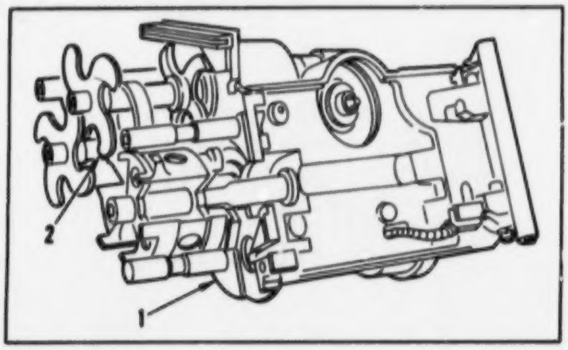
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. POSITION FEEDER ASSEMBLY.

a. Position feeder assembly (1) with lower sprocket (2) on top as shown.

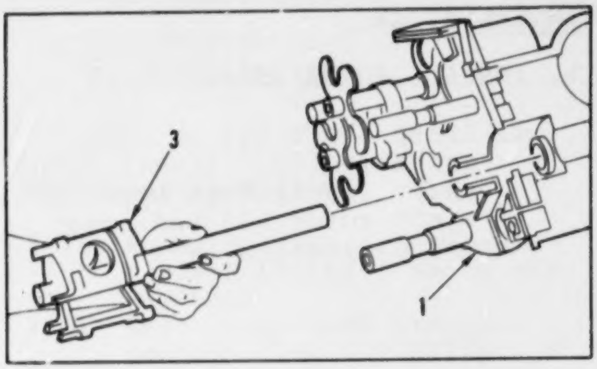


2-35. REPLACE ROTOR ASSEMBLY (cont) 2-35

REMOVAL (cont)

2. **REMOVE ROTOR ASSEMBLY.**

   a. Grasp front section of rotor (3). Pull rotor straight out of feeder assembly (1).

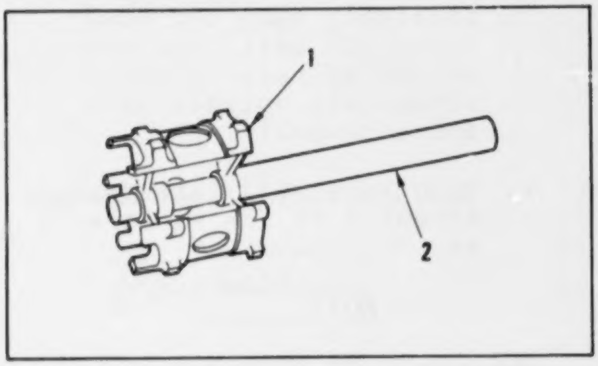


INSPECTION

1. **INSPECT ROTOR ASSEMBLY.**

   a. Visually inspect rotor (1) and rotor shaft (2) for cracks, bends, galls, and breaks.

   b. Get a new rotor assembly if any of above conditions are found. Repeat steps a and b.



LUBRICATION

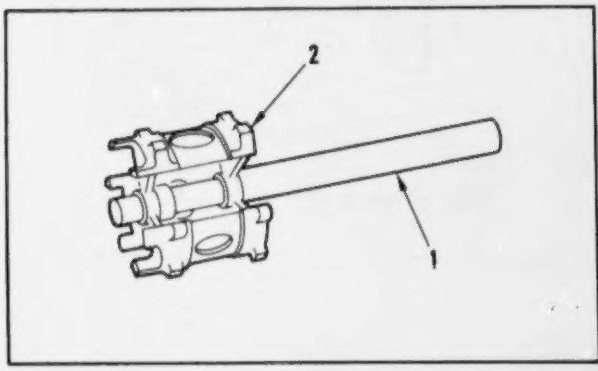
1. **LUBRICATE ROTOR ASSEMBLY.**

CAUTION

Do not apply grease to rotor. Grease on rotor will attract dust and dirt which might stop gun.

   a. Use acid brush. Apply light coat of grease (D2) to rotor shaft (1) of rotor assembly (2).

   b. Use acid brush. Apply light coat of grease (D2) to splines inside end of shaft (1).

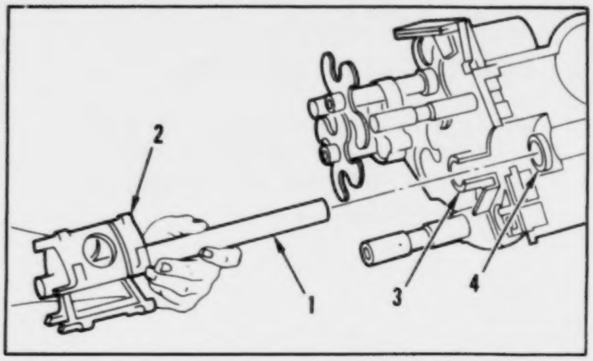


2-35. REPLACE ROTOR ASSEMBLY (cont) 2-35

INSTALLATION

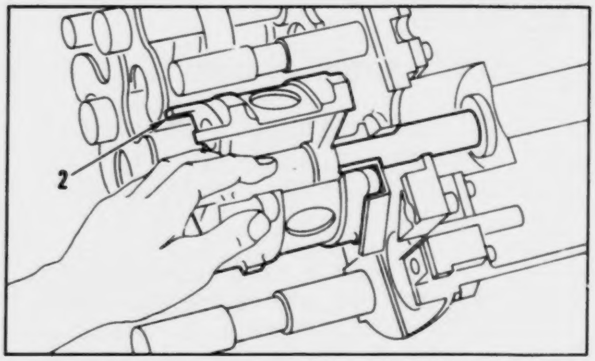
1. **INSTALL ROTOR ASSEMBLY.**

   a. Grasp shaft (1) of rotor assembly (2). Insert rotor shaft (1) through upper eject guide (3) and into drive assembly (4).



   b. Carefully turn and push rotor (2) until splines in end of rotor shaft slide into splines in drive assembly.

   c. Push rotor (2) into drive assembly as far as it will go.



NOTE

FOLLOW-ON MAINTENANCE: Install forward feed assembly (para 2-42, Initial Setup, INSTALLATION, and follow-on maintenance).

2-36. REPLACE UPPER FEED AND LOWER FEED SPROCKET ASSEMBLIES 2-36

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Sprocket Assemblies
12524155 (Upper Feed)
12524150 (Lower Feed)
(Fig. 3, Items 10 and 11,
(App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions:

2-43 Round positioner assembly removed (Initial Setup and REMOVAL)
2-31 Rear lower link stripper removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

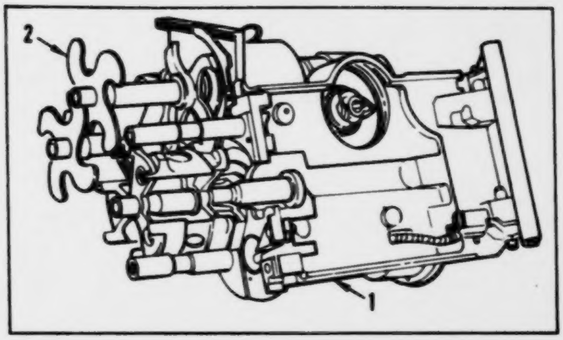
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. POSITION DRIVE ASSEMBLY.

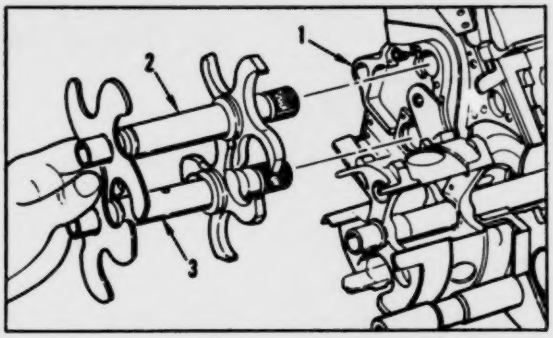
   a. Place drive assembly (1) on a clean flat surface with lower sprocket (2) up as shown.



2-36. REPLACE UPPER FEED AND LOWER FEED SPROCKET ASSEMBLIES (cont) 2-36

REMOVAL (cont)

2. **REMOVE UPPER AND LOWER FEED SPROCKET ASSEMBLIES.**



   a. Grasp upper sprocket (3) and lower sprocket (2) at same time.

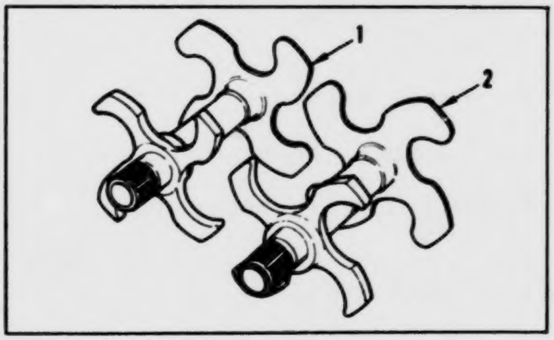
   b. Pull both sprockets straight out of drive assembly (1).

NOTE

The upper sprocket shaft is longer than the lower sprocket shaft.

INSPECTION

1. **INSPECT SPROCKET ASSEMBLIES.**



   a. Visually inspect both sprockets (1, 2) for cracks, chips, broken and bent parts.

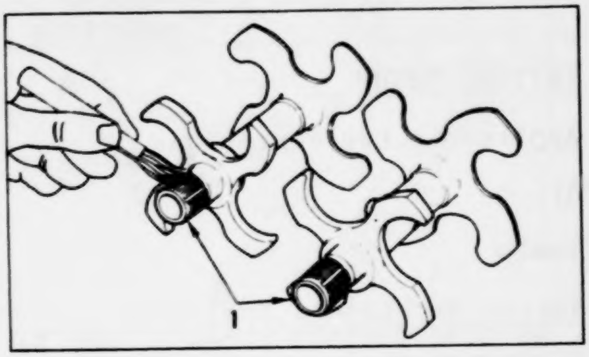
   b. Get new sprocket(s) if above conditions are found. Repeat steps a and b.

2-36. REPLACE UPPER FEED AND LOWER FEED SPROCKET ASSEMBLIES (cont)

LUBRICATION

1. **LUBRICATE SPROCKET ASSEMBLIES.**

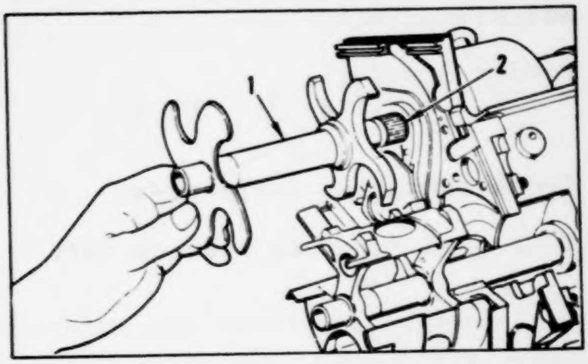
   a. Use acid brush. Apply light coat of grease (D2) to sprocket splines (1).



INSTALLATION

1. **INSTALL UPPER FEED AND LOWER FEED SPROCKET ASSEMBLIES.**

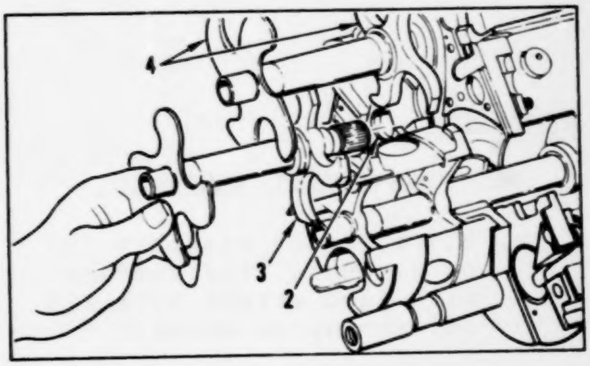
   a. Aline lower sprocket (short shaft) (1) with upper hole in drive assembly (2).



   b. Twist sprocket (1) in either direction until sprocket shaft splines match drive assembly splines.

   c. Slide shaft into place.

   d. Place upper sprocket legs (3) between lower sprocket legs (4). Aline upper sprocket shaft splines with lower hole of drive assembly (2).



   e. Slide shaft into place.

NOTE

FOLLOW-ON MAINTENANCE: Install rear lower link stripper (para 2-31, Initial Setup and INSTALLATION). Install round positioner assembly (para 2-43, Initial Setup, INSTALLATION, and follow-on maintenance).

2-37. REPLACE FEEDER STANDOFF 2-37

This task covers: a. Removal
b. Inspection
c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Feeder Standoff
12524115 (Fig. 3, Item 21, App C)

Troubleshooting References

2-11 Gun fires at reduced rate

Equipment Conditions

2-42 Forward feed assembly removed (Initial Setup and REMOVAL steps 1 thru 6)

General Safety Instructions

☠ **WARNING**

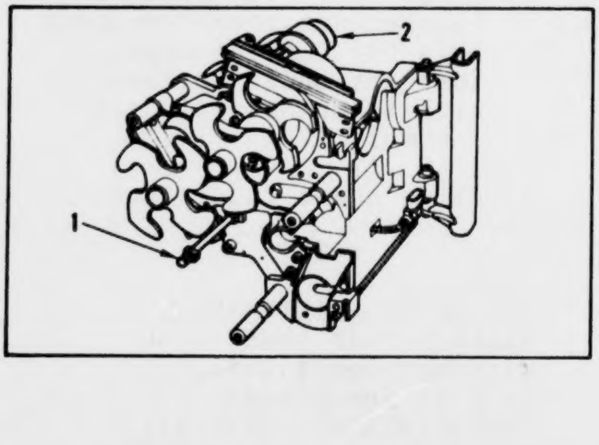
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly (1) on a clean, flat surface with feed select solenoid (2) at top as shown.

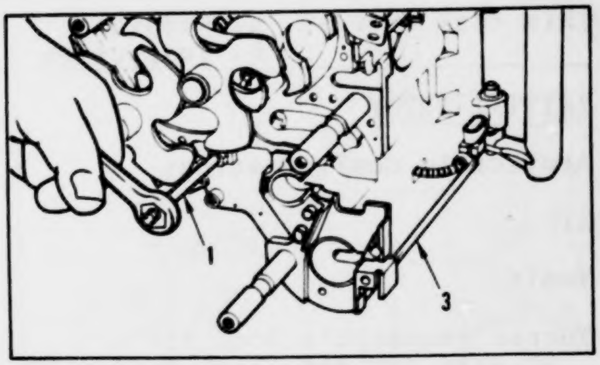


2-37. REPLACE FEEDER STANDOFF (cont) 2-37

REMOVAL (cont)

2. REMOVE FEEDER STANDOFF.

a. Use 13-mm combination box/open-end wrench. Remove standoff (3) from feeder assembly (1).

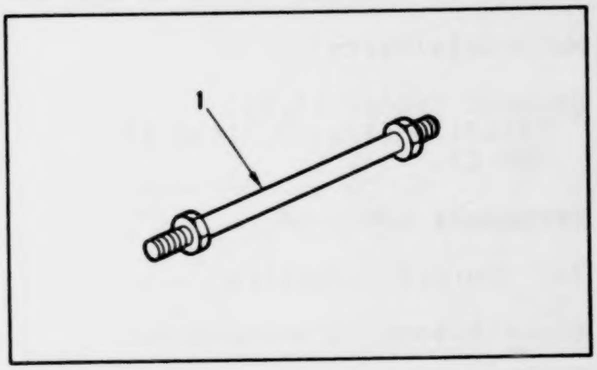


INSPECTION

1. INSPECT FEEDER STANDOFF.

a. Visually inspect standoff (1) for stripped threads, bends, cracks, and chips.

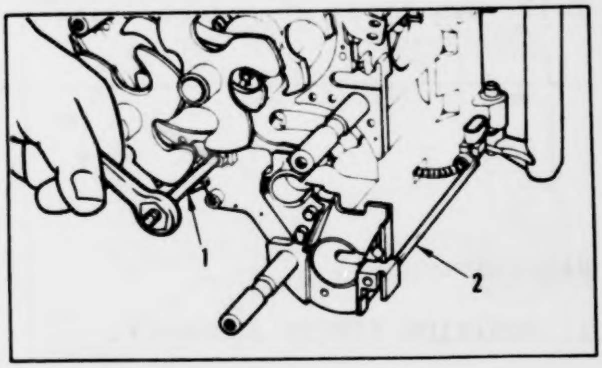
b. Get a new standoff if any of above conditions are found. Repeat steps a and b.



INSTALLATION

1. INSTALL FEEDER STANDOFF.

a. Use 13-mm combination box/open-end wrench. Install short threaded end of standoff (1) into feeder assembly (2).



NOTE

FOLLOW-ON MAINTENANCE: Install forward feed assembly (para 2-42, Initial Setup, INSTALLATION, and follow-on maintenance).

2-38. REPLACE STEPPED SPACERS 2-38

This task covers: a. Removal b. Inspection c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Stepped Spacer (3 ea)
12524136 (Fig. 3, Item 18, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-11 Gun fires at reduced rate

Equipment Conditions

2-43 Round positioner (including one stepped spacer) removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

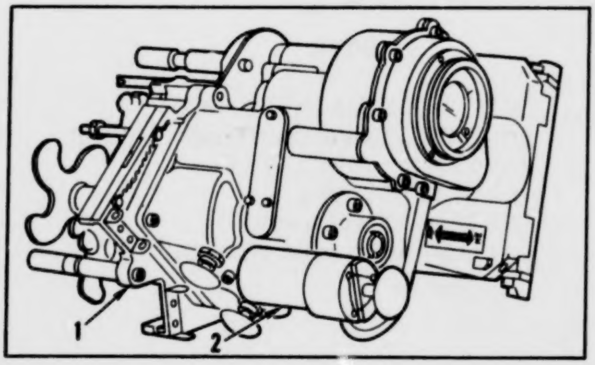
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly (1) with feed select solenoid (2) at bottom as shown.

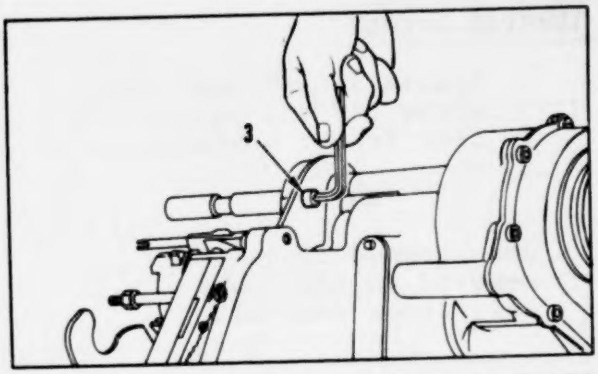


2-38. REPLACE STEPPED SPACERS (cont) 2-38

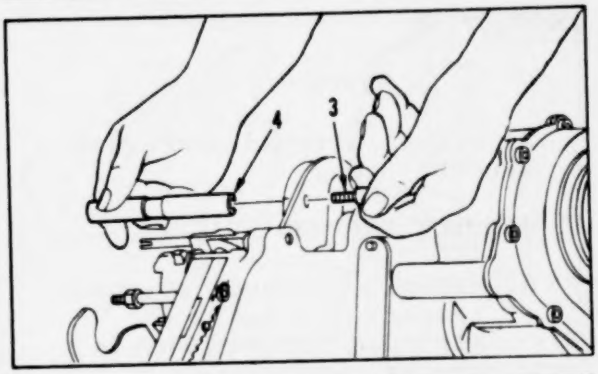
REMOVAL (cont)

2. **REMOVE LOWER RIGHT STEPPED SPACER.**

   a. Use 6-mm hex key. Loosen socket head cap screw (3).

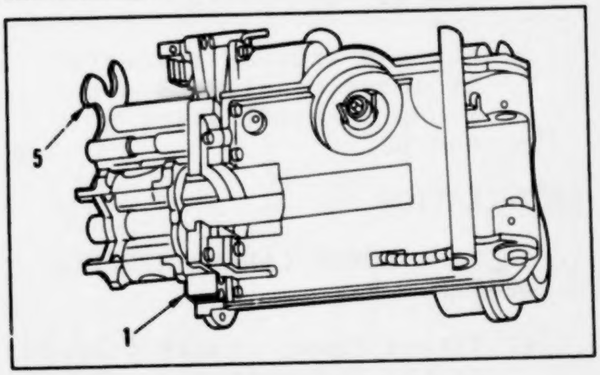


   b. Remove socket head cap screw (3) and lower right stepped spacer (4) from feeder assembly.



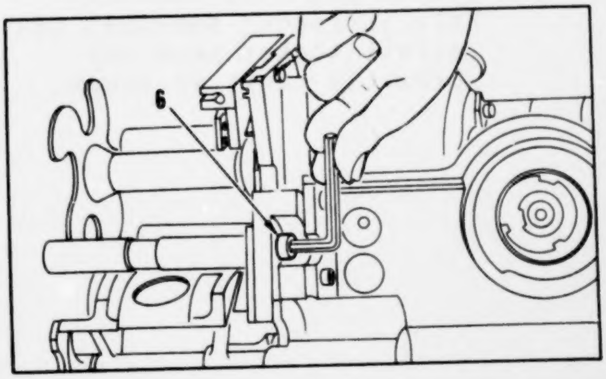
3. **POSITION FEEDER ASSEMBLY.**

   a. Position feeder assembly (1) with lower sprocket (5) up as shown.



4. **REMOVE LOWER CENTER STEPPED SPACER.**

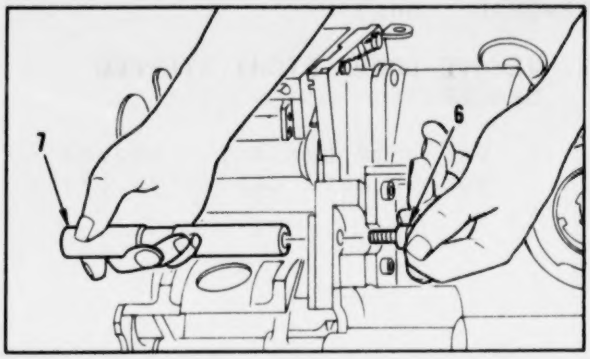
   a. Use 6-mm hex key. Loosen stepped spacer socket head cap screw (6).



MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-38. REPLACE STEPPED SPACERS (cont) 2-38

REMOVAL (cont)

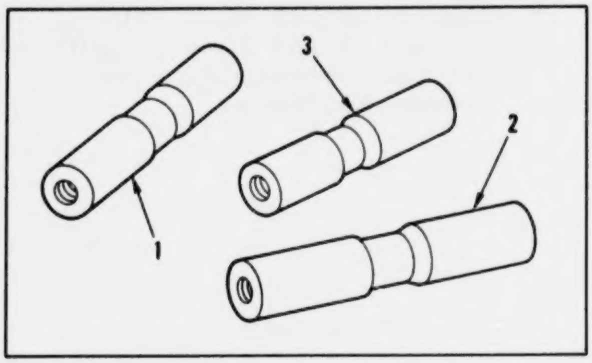


b. Remove socket head cap screw (6) and spacer (7) from feeder assembly.

NOTE

One stepped spacer is removed during round positioner removal.

INSPECTION



NOTE

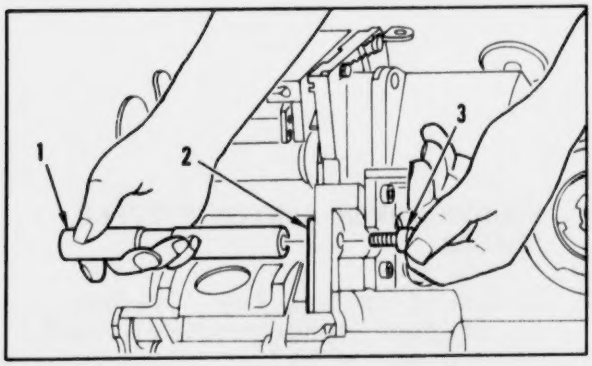
All three stepped spacers are the same.

1. **INSPECT STEPPED SPACERS.**

a. Visually inspect stepped spacers (1, 2, 3) for stripped threads, bends, cracks, and chips.

b. Get new stepped spacer(s) if above conditions are found. Repeat steps a and b.

INSTALLATION



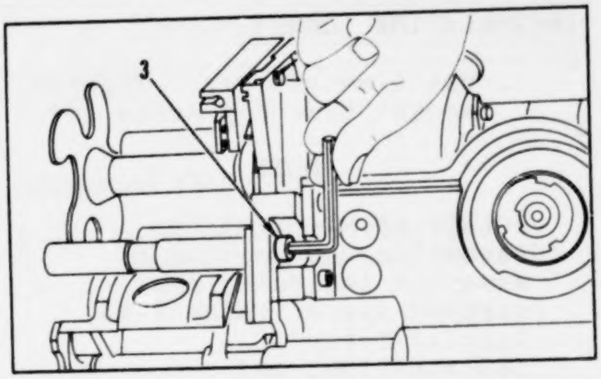
1. **INSTALL LOWER CENTER STEPPED SPACER.**

a. Insert lower center stepped spacer (1) into recessed hole in feeder assembly (2). Install socket head cap screw (3) until it stops.

2-38. REPLACE STEPPED SPACERS (cont) 2-38

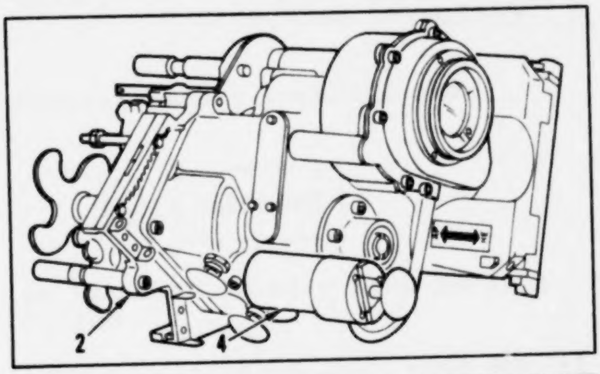
INSTALLATION (cont)

b. Use 6-mm hex key. Tighten socket head cap screw (3).

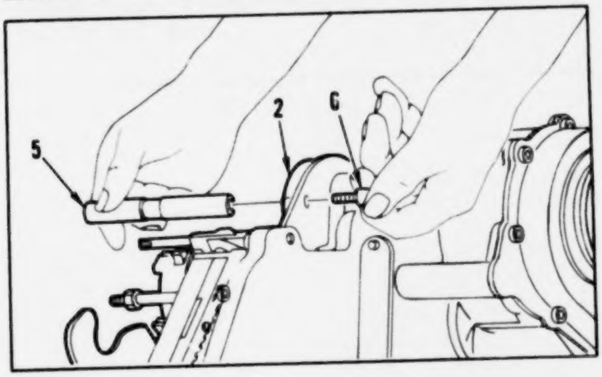


2. **INSTALL LOWER RIGHT STEPPED SPACER.**

   a. Place feeder assembly (2) on side with feed select solenoid (4) at bottom as shown.



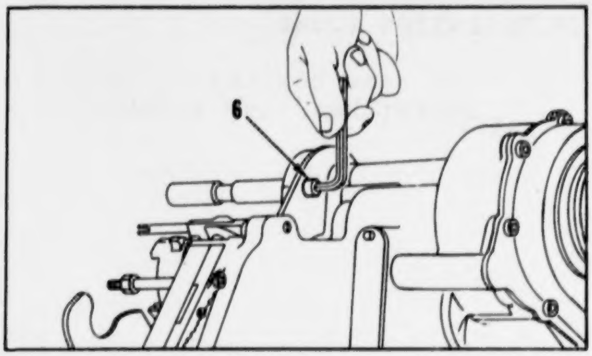
   b. Insert lower right stepped spacer (5) into recessed hole in feeder assembly (2). Install socket head cap screw (6) until it stops.



MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-38. REPLACE STEPPED SPACERS (cont) 2-38

INSTALLATION (cont)



c. Use 6-mm hex key. Tighten socket head cap screw (6).

NOTE

FOLLOW-ON MAINTENANCE: Install round positioner assembly including one stepped spacer (para 2-43, Initial Setup, INSTALLATION, and follow-on maintenance).

2-39. REPLACE UPPER EJECT GUIDE 2-39

This task covers: a. Removal
b. Inspection
c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Upper Eject Guide
12524116 (Fig. 3, Item 24, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions

2-35 Rotor assembly removed (Initial Setup and REMOVAL)

General Safety Instructions

☠ **WARNING**

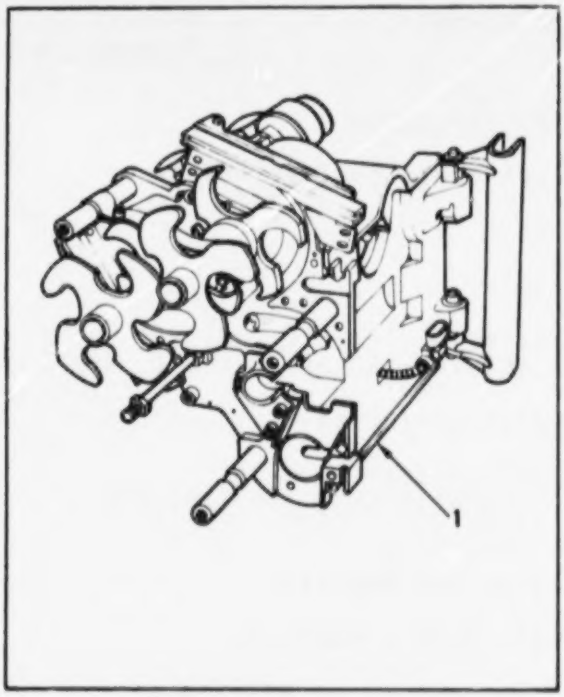
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

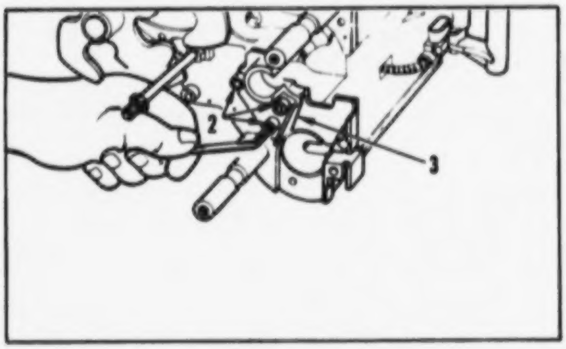
1. POSITION FEEDER ASSEMBLY.

a. Place feeder assembly (1) on side as shown.

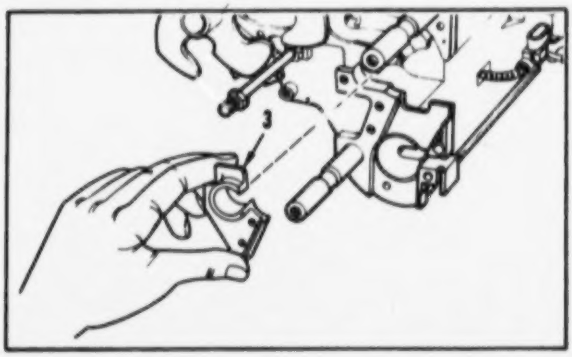


2. REMOVE EJECT GUIDE.

a. Use 5-mm hex key. Remove three socket head cap screws (2) from eject guide (3).

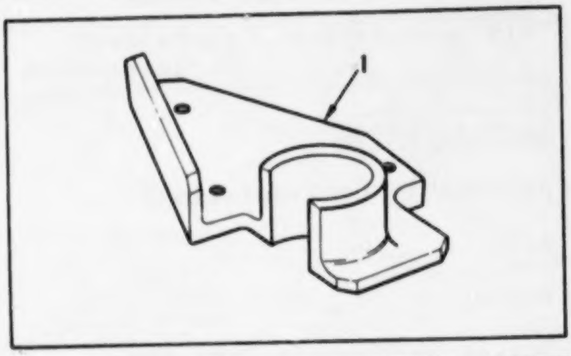


b. Remove eject guide (3).



2-39. REPLACE UPPER EJECT GUIDE (cont) 2-39

INSPECTION

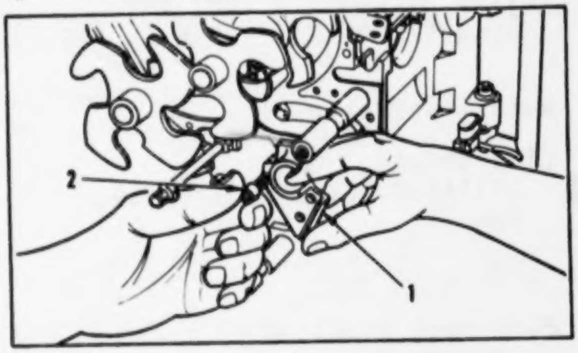


1. **INSPECT EJECT GUIDE.**

   a. Visually inspect eject guide (1) for bends, cracks, and chips.

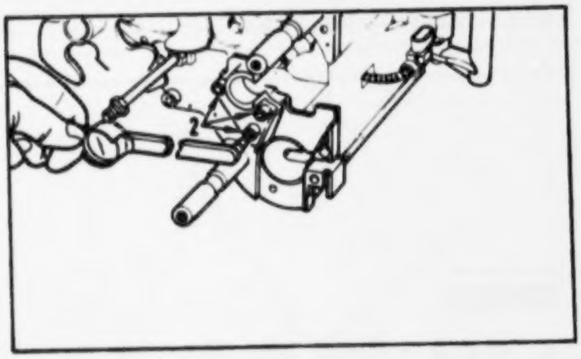
   b. Get a new eject guide if any of above conditions are found. Repeat steps a and b.

INSTALLATION



1. **INSTALL EJECT GUIDE.**

   a. Place eject guide (1) on feeder assembly as shown. Install three socket head cap screws (2) finger-tight.



   b. Use torque wrench and 5-mm socket wrench attachment. Torque three socket head cap screws (2) to 67 in.-lb ±8 in.-lb (77 cmkg ±9 cmkg).

NOTE

FOLLOW-ON MAINTENANCE: Install rotor assembly (para 2-35, Initial Setup, INSTALLATION, and follow-on maintenance).

MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-40. REPLACE LINK SHIELD 2-40

This task covers:
a. Removal
b. Inspection
c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Link Shield
12524103 (Fig. 3, Item 19, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions

2-27 Feeder assembly removed from gun

General Safety Instructions

WARNING

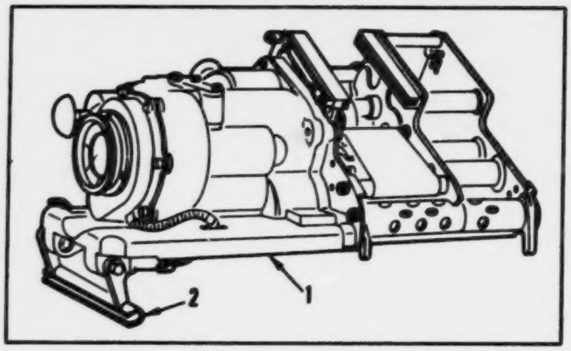
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **PLACE FEEDER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position feeder assembly (1) with feeder lock handle (2) down as shown.

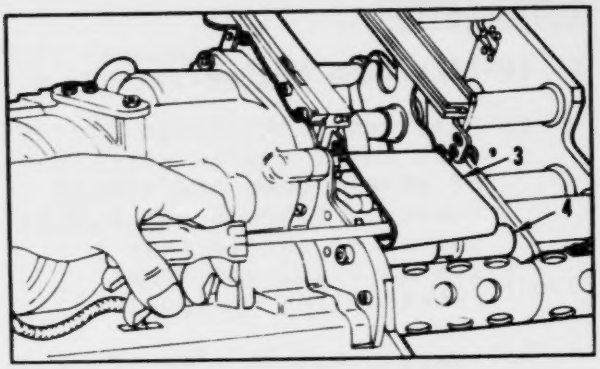


2-40. REPLACE LINK SHIELD (cont) 2-40

REMOVAL (cont)

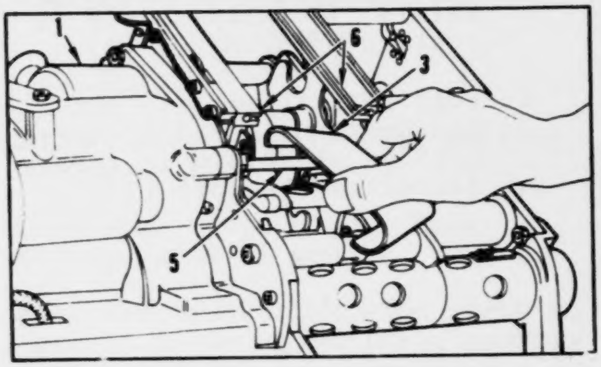
2. **REMOVE LINK SHIELD.**

    a. Use 6-inch shaft flat-tip screwdriver. Place tip of screwdriver under link shield (3) as shown.



    b. Pry up on shield until shield springs away from stepped spacer (4).

    c. Lift link shield (3) about one inch. Push link shield (3) toward feeder until small curved portion of shield is clear of standoff (5) and is under link strippers (6). Lift and rotate shield (3) to right. Remove shield (3) from feeder (1).

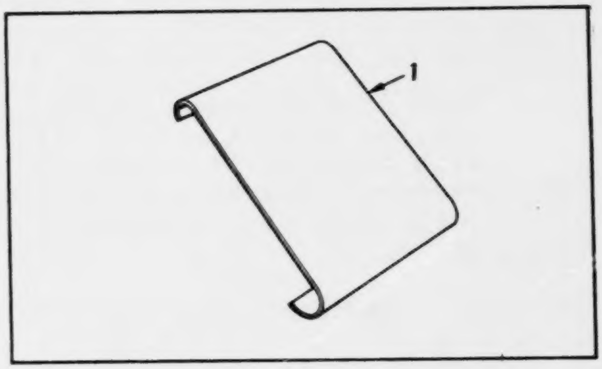


INSPECTION

1. **INSPECT LINK SHIELD.**

    a. Visually inspect link shield (1) for bends and cracks.

    b. Get a new link shield if above conditions are found. Repeat steps a and b.



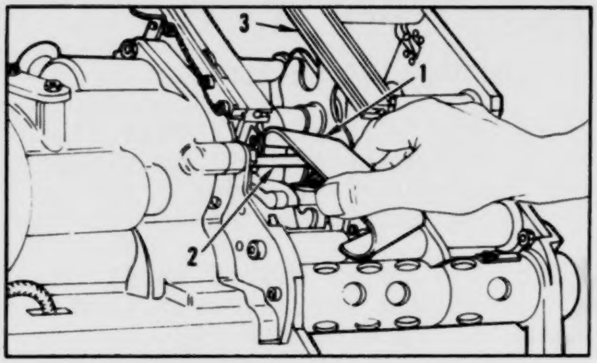
MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-40. REPLACE LINK SHIELD (cont) 2-40

INSTALLATION

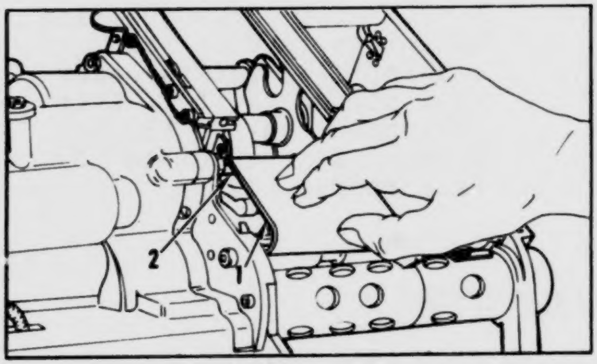
1. **INSTALL LINK SHIELD.**

   a. Position link shield (1) with small curved portion of shield down and toward feeder. Place upper right corner of shield over standoff (2) and under forward link stripper (3).

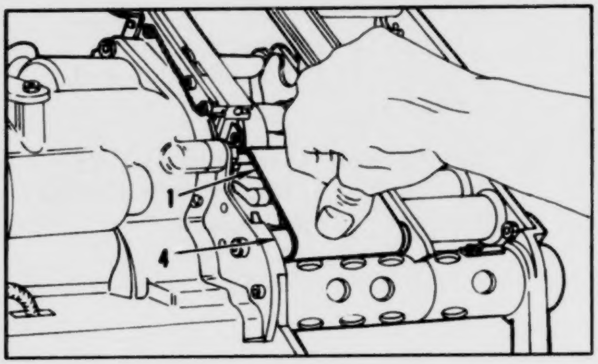


   b. Lower the left side of shield (1) until shield is resting on standoff (2).

   c. Pull link shield (1) out and down until small curved portion of shield is firmly seated on standoff (2).



   d. Push down on lower center portion of link shield (1) with thumb until large curve of link shield snaps down over stepped spacer (4).



NOTE

FOLLOW-ON MAINTENANCE: Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-41. FEEDER DRIVE ASSEMBLY REPAIR LOCK HANDLE ASSEMBLY

This task covers:
a. Disassembly
b. Inspection
c. Lubrication
d. Assembly
e. Operational Check

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
8 x 5/8-Inch Aluminum Tube (Item 8, App D)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-17 Gun fires intermittently
2-19 Gun fires at irregular rate

Equipment Conditions

2-27 Feeder assembly removed from gun

General Safety Instructions

WARNING

Do not wear jewelry when working on gun.

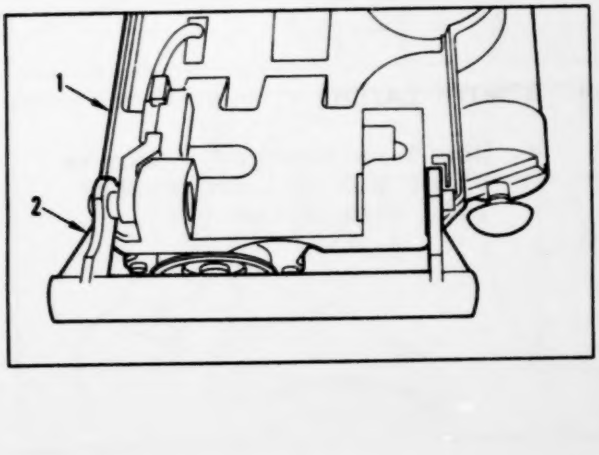
Keep your fingers away from moving parts of gun.

Wear eye protection when removing springs or using striking instruments. You can be blinded if spring or flying chips hits you in the eye. Get medical help if spring or flying chips hits you in the eye.

DISASSEMBLY

1. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly (1) on suitable work surface with lock handle (2) in unlock position as shown.



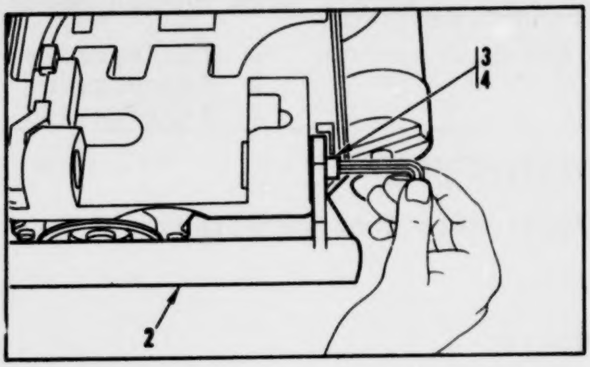
MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-41. REPAIR LOCK HANDLE ASSEMBLY (cont) 2-41

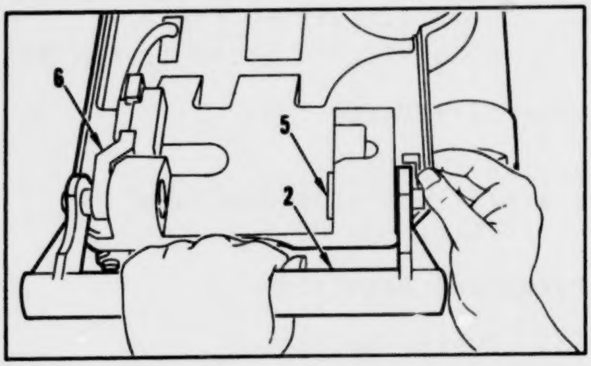
DISASSEMBLY (cont)

2. **REMOVE LOCK HANDLE.**

   a. Use 5-mm hex key. Remove socket head cap screws (3) and washers (4) from both ends of lock handle (2).

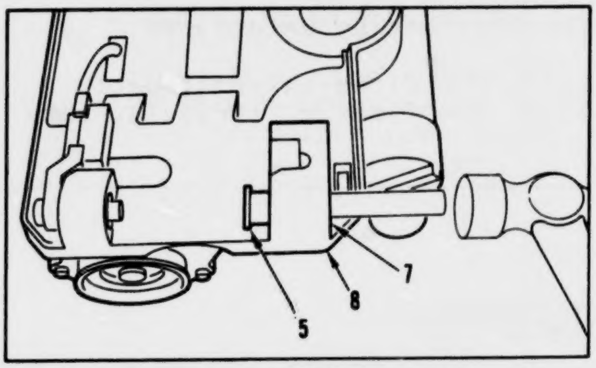


   b. Move lock handle (2) to right to remove handle from cam bushing (5). Move handle to left to remove handle from slotted bushing assembly (6).



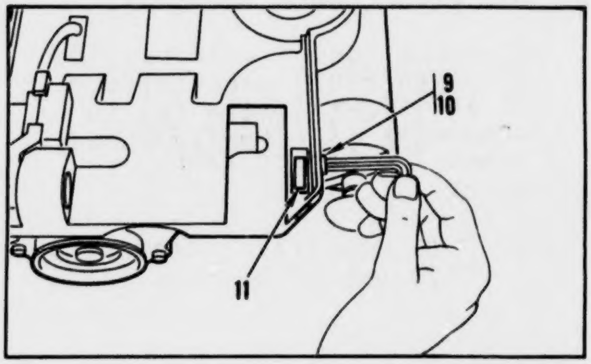
3. **REMOVE CAM BUSHING.**

   a. Use 8 x 5/8-inch aluminum tube and ball peen hammer. Tap cam bushing (5) out of lug (7) on drive assembly housing (8).



4. **REMOVE LATCH.**

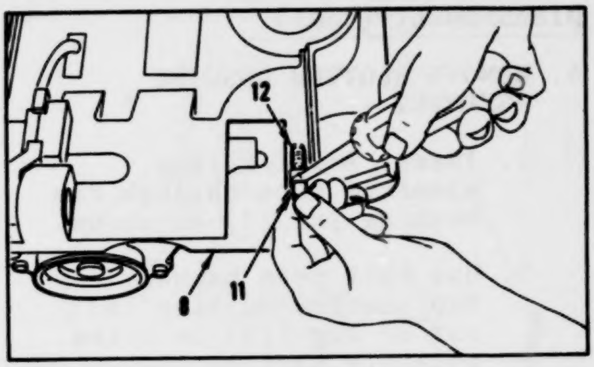
   a. Use 5-mm hex key. Remove pivot pin (9) and washer (10) from latch (11).



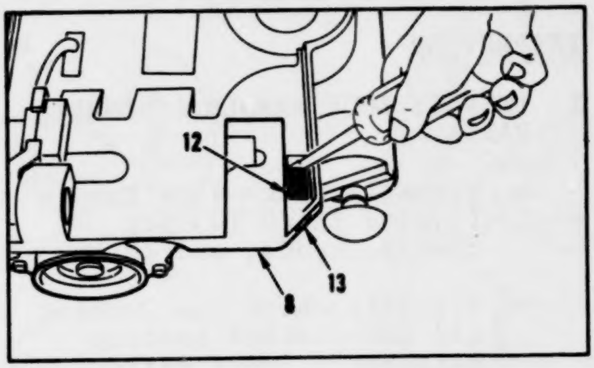
2-41. REPAIR LOCK HANDLE ASSEMBLY (cont) 2-41

DISASSEMBLY (cont)

b. Use 1/8-inch flat-tip screwdriver. Depress spring (12) into drive assembly housing (8). Rotate latch (11) up and out of drive assembly housing.

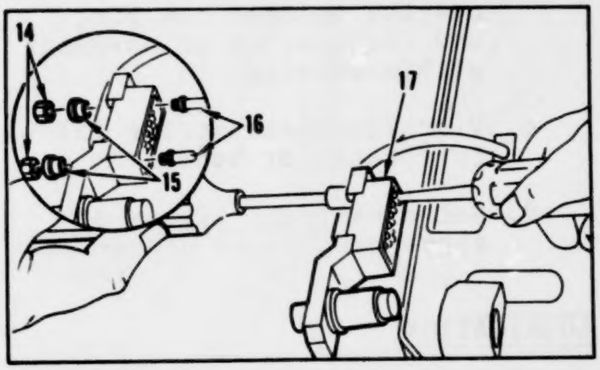


c. Use 1/8-inch flat-tip screwdriver. Push spring (12) out of hole (13) in drive assembly housing (8).



5. **REMOVE ELECTRICAL CONNECTOR.**

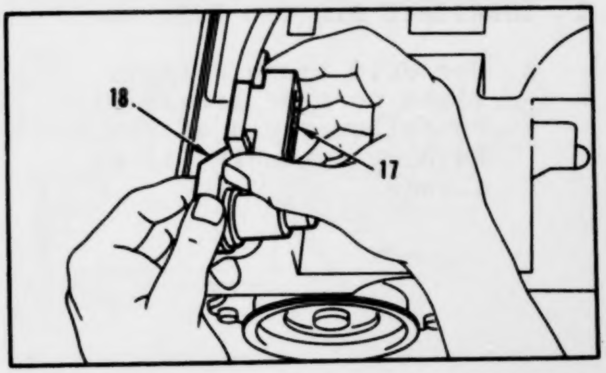
a. Use 1/8-inch flat-tip screwdriver and 5/32-inch socket with handle. Remove two nuts (14), spacers (15), and guide pins (16).



NOTE

Use screwdriver to pry on rubber part of connector if needed to remove connector from bracket.

b. Pull electrical connector (17) out of bracket (18).



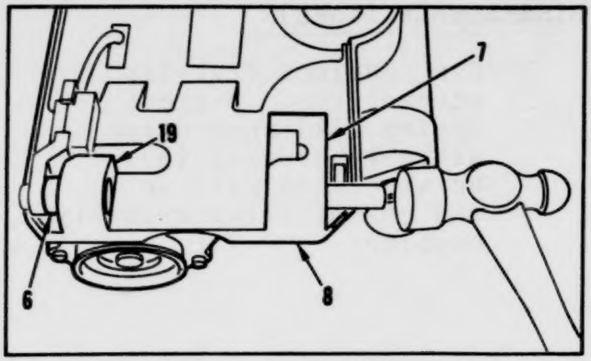
2-41. REPAIR LOCK HANDLE ASSEMBLY (cont) 2-41

DISASSEMBLY (cont)

6. **REMOVE SLOTTED BUSHING ASSEMBLY.**

   a. Insert 8 x 5/8-inch aluminum tube through cam bushing lug (7) as shown.

   b. Use ball peen hammer. Tap slotted bushing (6) out of lug (19) on drive assembly housing (8).



INSPECTION

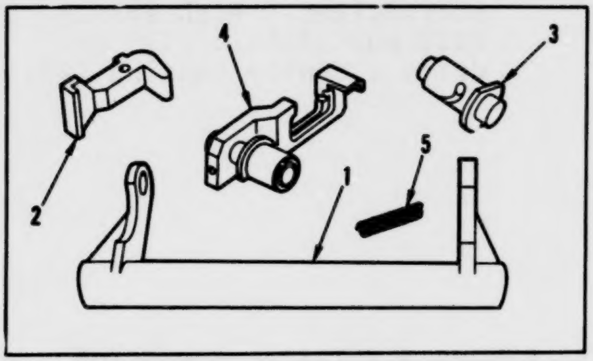
1. **INSPECT LOCK HANDLE ASSEMBLY PARTS.**

   a. Visually check lock handle (1) and latch (2) for cracks, bends, and chips.

   b. Visually check cam bushing (3) and slotted bushing assembly (4) for galls, cracks, chipped cam pin and for freedom of movement within bushing.

   c. Visually check spring (5) for breaks or bends.

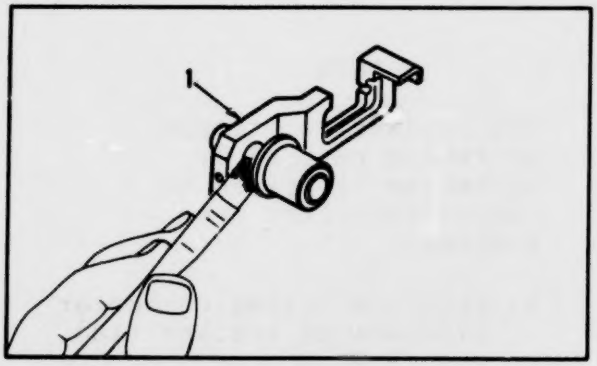
   d. Get a new part if any of above conditions are found.



LUBRICATION

1. **LUBRICATE SLOTTED BUSHING.**

   a. Use acid brush. Apply light coat of grease (D2) to follower pin of slotted bushing assembly (1) as shown.

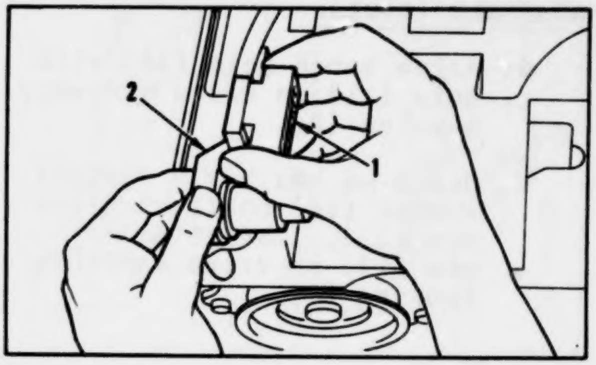


2-41. REPAIR LOCK HANDLE ASSEMBLY (cont) 2-41

ASSEMBLY

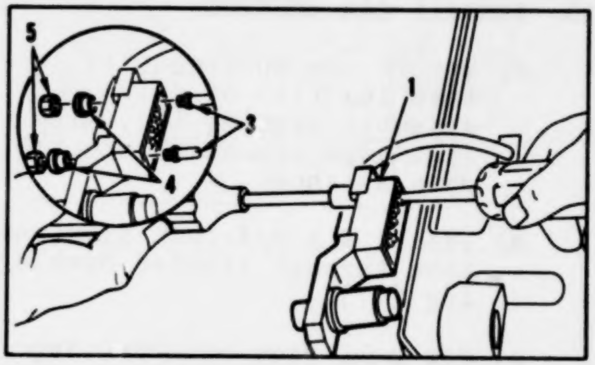
1. **INSTALL ELECTRICAL CONNECTOR.**

   a. Insert connector (1) into slotted bushing assembly bracket (2) with pin side of connector facing inward as shown.



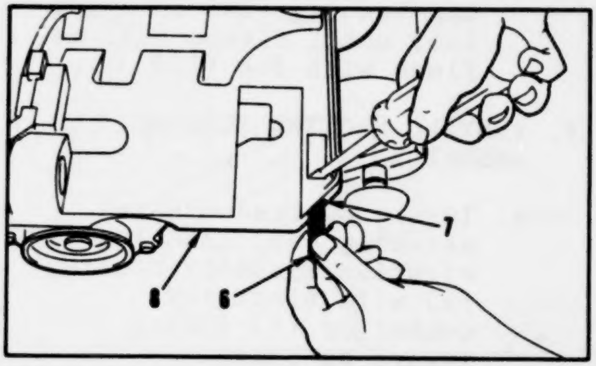
   b. Install guide pins (3) through connector and bracket.

   c. Use 1/8-inch flat-tip screwdriver and 5-32-inch socket with spin handle. Hold guide pins (3). Install two spacers (4) and secure with two nuts (5).



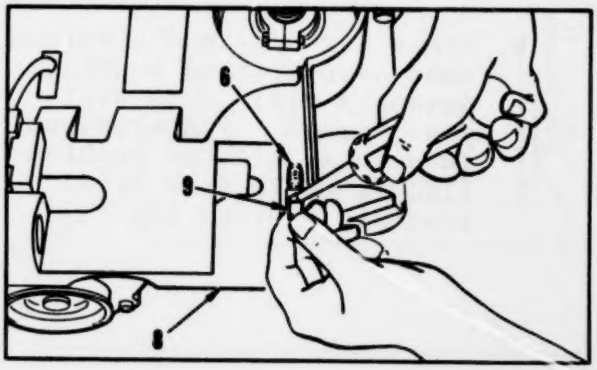
2. **INSTALL LATCH.**

   a. Use 1/8-inch flat-tip screwdriver. Insert spring (6) into hole (7) of drive assembly housing (8).



   b. Use 1/8-inch flat-tip screwdriver. Compress spring (6) completely into drive assembly housing (8).

   c. Rotate latch (9), small end first, into drive assembly housing. Remove screwdriver.



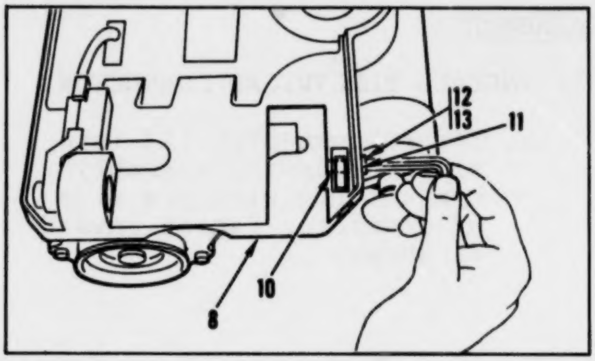
MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-41. REPAIR LOCK HANDLE ASSEMBLY (cont) 2-41

ASSEMBLY (cont)

d. Aline latch hole (10) with hole (11) in drive assembly housing (8).

e. Use 5-mm hex key. Install washer (12) on latch pivot pin (13); install pivot pin (13) in drive assembly housing (8).

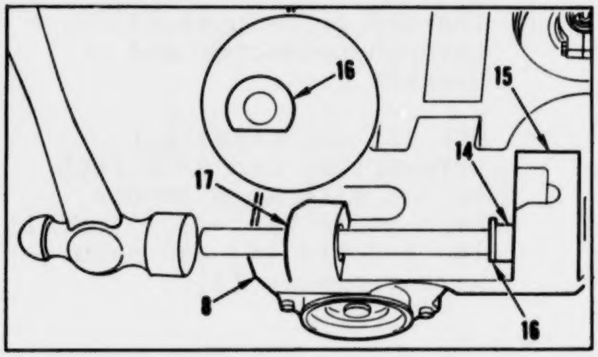


3. **INSTALL CAM BUSHING.**

a. Insert cam bushing (14) into lug (15) of drive assembly housing (8), with flat edge of cam flange (16) down as shown.

b. Insert 8 x 5/8-inch aluminum tube through slotted bushing lug (17).

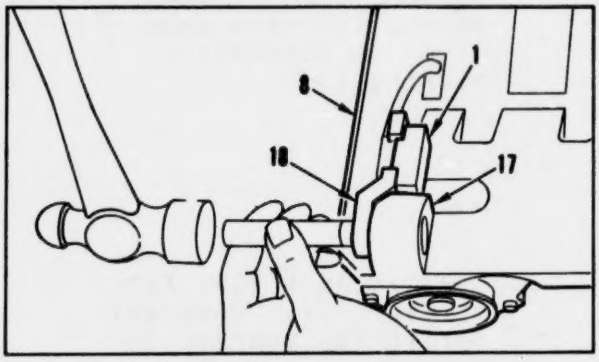
c. Use ball peen hammer. Tap cam bushing (14) into lug (15) until flange (16) is flush with lug (15).



4. **INSTALL SLOTTED BUSHING ASSEMBLY.**

a. Insert slotted bushing assembly (18) into lug (17) of drive assembly housing (8) with electrical connector (1) facing inward as shown.

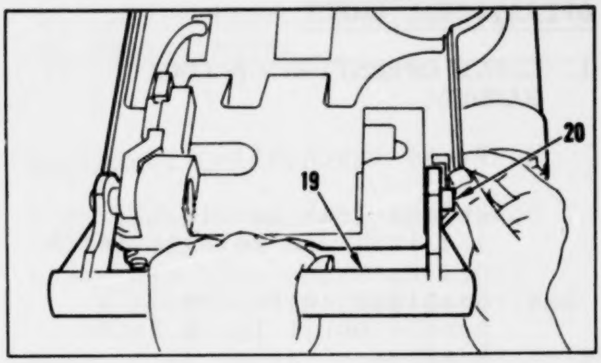
b. Place 8 x 5/8-inch aluminum tube over slotted bushing assembly (18). Use ball peen hammer. Tap aluminum tube until slotted bushing (18) is flush with drive assembly housing lug (17).



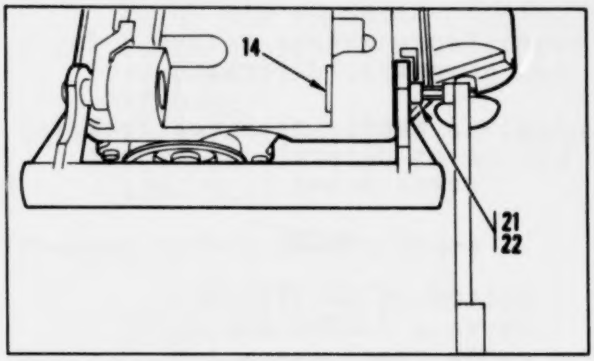
ASSEMBLY (cont)

5. INSTALL LOCK HANDLE.

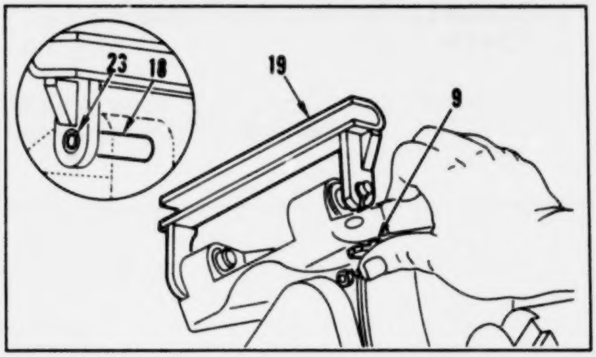
a. Place slotted side of lock handle (19) on cam bushing (20) as shown.



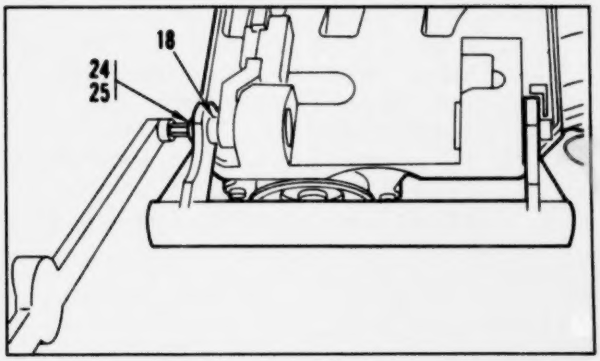
b. Use torque wrench and 5-mm socket wrench attachment. Install washer (21) on socket head cap screw (22); install cap screw (22) in cam bushing (14). Torque cap screw (22) to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).



c. Press latch (9) and rotate lock handle (19) up, alining hole (23) in lock handle with slotted bushing assembly (18) at same time.

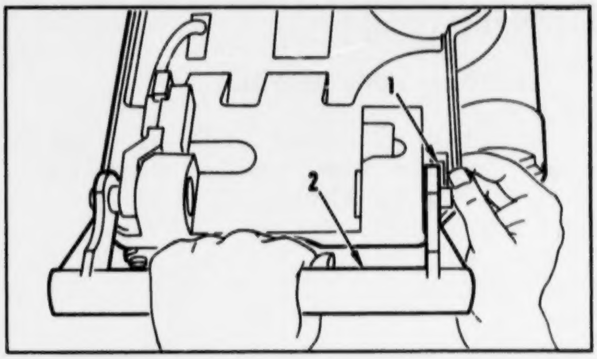


d. Use torque wrench and 5-mm socket wrench attachment. Install washer (24) on socket head cap screw (25); install cap screw (25) into slotted bushing (18). Torque cap screw (25) to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).



2-41. REPAIR LOCK HANDLE ASSEMBLY (cont) 2-41

OPERATIONAL CHECK



1. **CHECK OPERATION OF LOCK HANDLE.**

   a. Press latch (1).

   b. Rotate lock handle (2) 1/2 inch and release latch.

   c. Continue to rotate lock handle until latch locks handle.

   d. Repeat steps a thru c in opposite direction.

   e. If handle does not lock in both directions, repeat steps b and c.

NOTE

FOLLOW-ON MAINTENANCE: Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-42. REPLACE FORWARD FEED ASSEMBLY 2-42

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Forward Feed Assembly
12524120 (Fig. 3, Item 16, App C)
Self-Locking Nut
12524617-1 (Fig. 3, Item 1, (App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-11 Gun fires at reduced rate

Equipment Conditions

2-27	Feeder assembly removed from gun
2-32	Ejection chute assembly removed (Initial Setup and REMOVAL)
2-40	Link shield removed (Initial Setup and REMOVAL)
2-28	Forward upper link stripper removed (Initial Setup and REMOVAL)
2-29	Forward lower link stripper removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

Do not wear jewelry when working on gun.

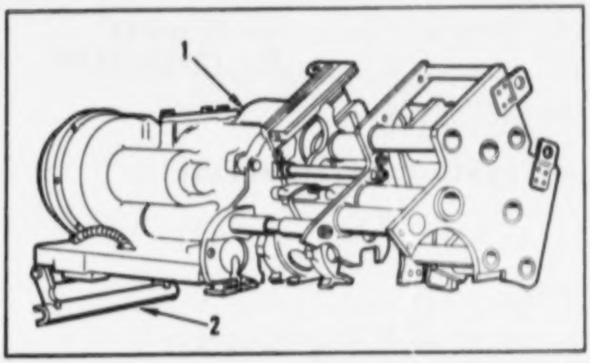
Keep your fingers away from moving parts of gun.

2-42. REPLACE FORWARD FEED ASSEMBLY (cont) 2-42

REMOVAL

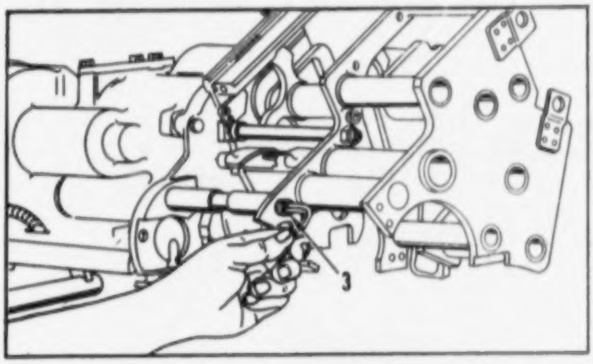
1. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly (1) on a clean, flat surface with feeder handle (2) down.



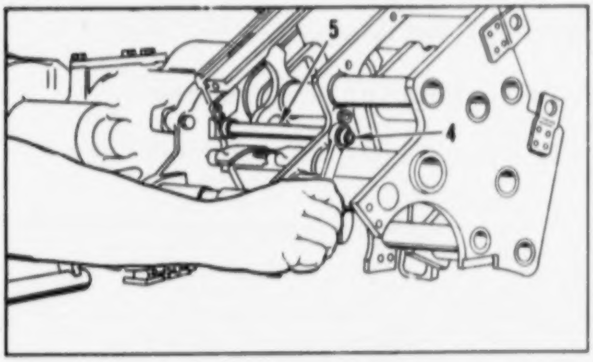
2. **REMOVE SPACER CAP SCREW.**

   a. Use 6-mm hex key. Remove lower right stepped spacer socket head cap screw (3).



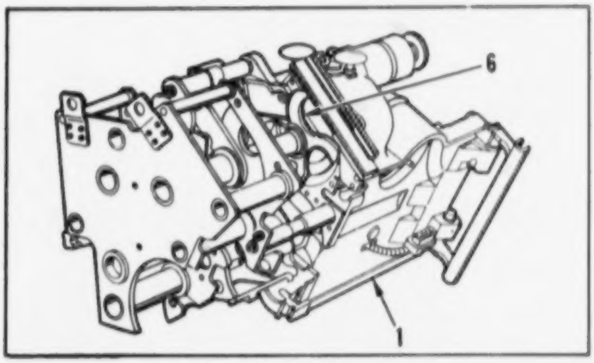
3. **REMOVE SELF-LOCKING NUT.**

   a. Use 10-mm box wrench. Remove self-locking nut (4) from standoff (5). Discard nut.



4. **POSITION FEEDER ASSEMBLY.**

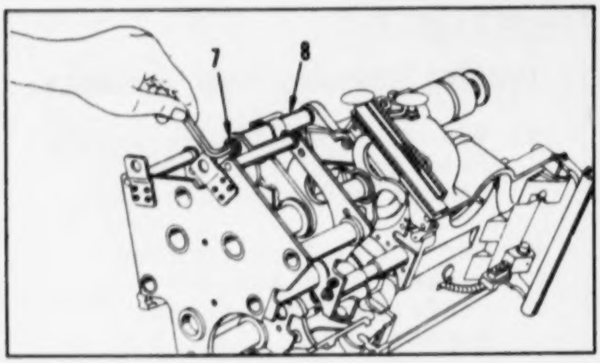
   a. Place feeder assembly (1) with lower sprocket (6) up as shown.



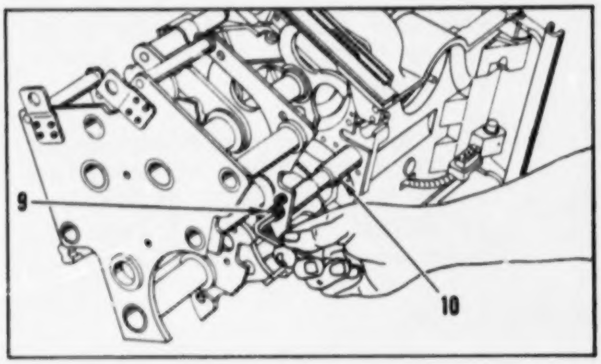
REMOVAL (cont)

5. **REMOVE SPACER SOCKET HEAD CAP SCREWS.**

   a. Use 6-mm hex key. Remove socket head cap screw (7) from upper left stepped spacer (8).



   b. Use 6-mm hex key. Remove socket head cap screw (9) from lower left stepped spacer (10).

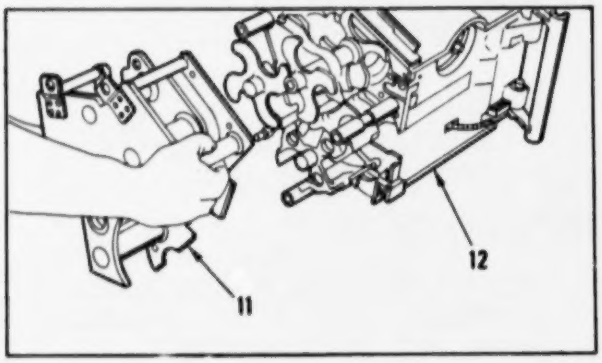


6. **REMOVE FORWARD FEED ASSEMBLY.**

NOTE

If required, tap forward feed assembly lightly with a plastic-face hammer to loosen from drive assembly.

   a. Pull forward feed assembly (11) away from drive assembly (12). Remove forward feed assembly.

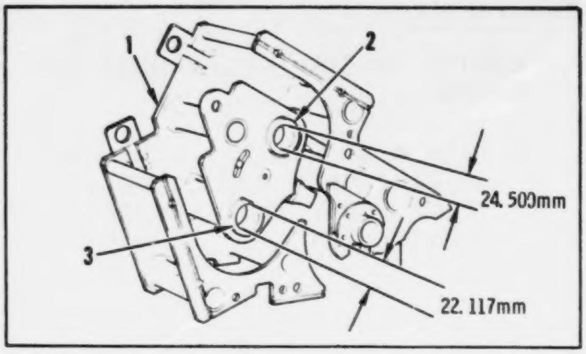


7. **REMOVE FORWARD FEEDER GATE ASSEMBLY** (para 2-33, Initial Setup and REMOVAL).

8. **REMOVE CARTRIDGE GUIDE** (para 2-34, Initial Setup and REMOVAL).

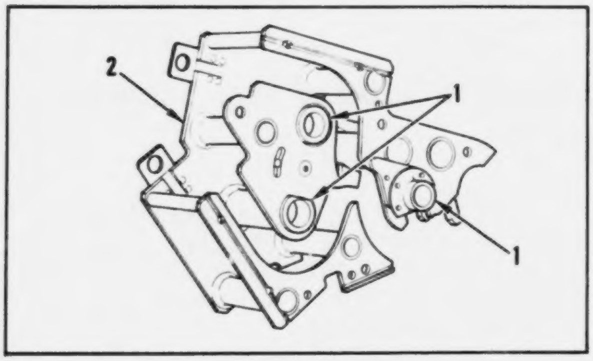
2-42. REPLACE FORWARD FEED ASSEMBLY (cont) 2-42

INSPECTION



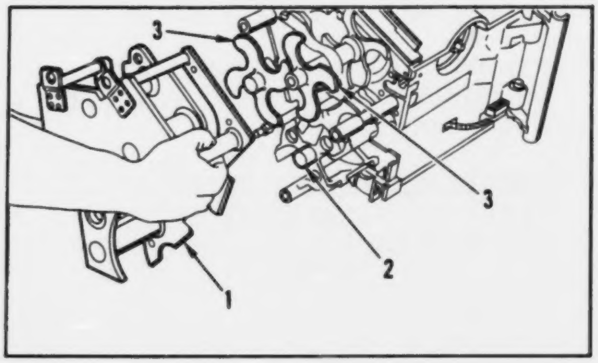
1. **INSPECT FORWARD FEED ASSEMBLY.**
   - a. Visually inspect forward feed assembly (1) for cracks and broken parts.
   - b. Get a new forward feed assembly if above conditions are found. Repeat steps a and b.
   - c. Measure inside diameters of upper bushing (2) and lower bushing (3).
   - d. If wear in upper bushing (2) exceeds 24.500mm or wear in lower bushing (3) exceeds 22.117mm, replace forward feed assembly (para 2-42).

LUBRICATION



1. **LUBRICATE FORWARD FEED ASSEMBLY BUSHINGS.**
   - a. Use acid brush. Apply light coat of grease (D2) to bushings (1) on forward feed assembly (2).

INSTALLATION



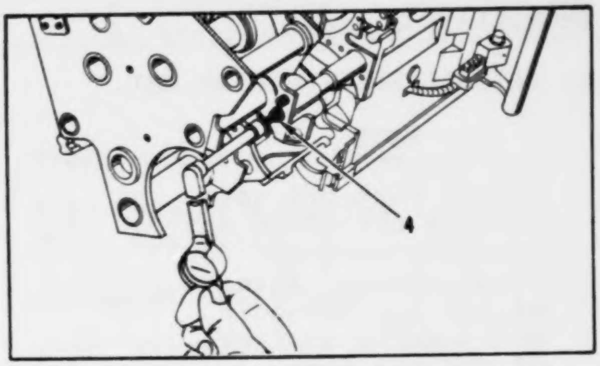
1. **INSTALL FORWARD FEEDER GATE ASSEMBLY** (para 2-33, Initial Setup and INSTALLATION).
2. **INSTALL CARTRIDGE GUIDE** (para 2-34, Initial Setup and INSTALLATION).
3. **INSTALL FORWARD FEED ASSEMBLY.**
   - a. Aline forward feed assembly (1) with rotor (2) and sprockets (3).
   - b. Push forward feed assembly (1) until rotor (2) and sprockets (3) are seated.

2-42. REPLACE FORWARD FEED ASSEMBLY (cont) 2-42

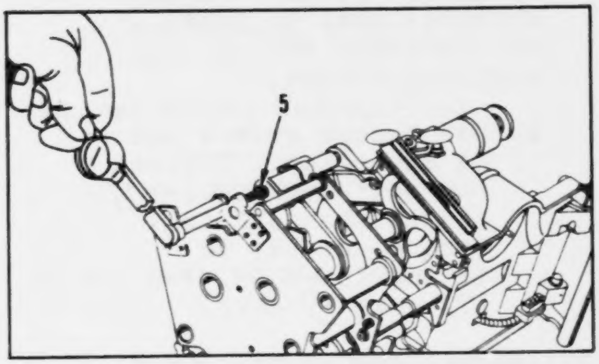
INSTALLATION (cont)

4. **INSTALL SPACER SOCKET HEAD CAP SCREWS.**

   a. Use torque wrench, extension, and 6-mm socket wrench attachment. Install socket head cap screw (4) into lower left stepped spacer. Torque cap screw (4) to 67 in.-lb ±8 in.-lb (77 cmkg ±9 cmkg).

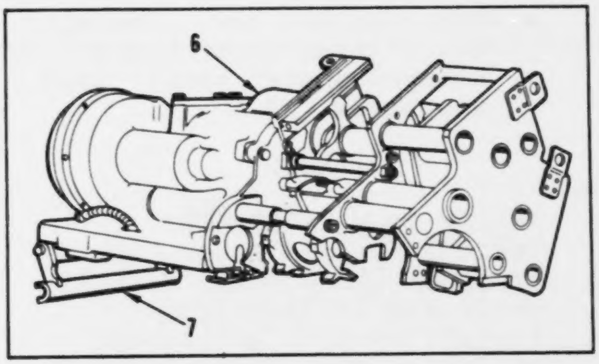


   b. Use torque wrench, extension, and 6-mm socket wrench attachment. Install socket head cap screw (5) into upper left stepped spacer. Torque cap screw (5) to 67 in.-lb ±8 in.-lb (77 cmkg ±9 cmkg).



5. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly (6) on a clean, flat surface with feeder lock handle (7) down as shown.



MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-42. REPLACE FORWARD FEED ASSEMBLY (cont) 2-42

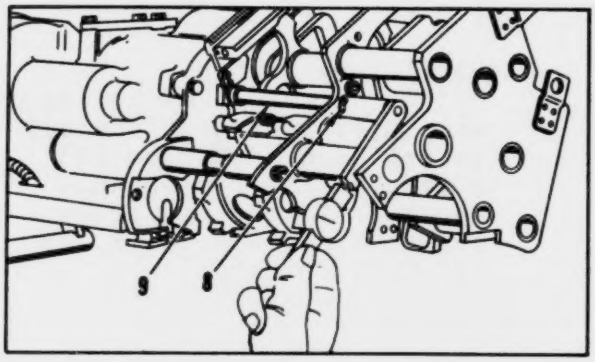
INSTALLATION (cont)

6. **INSTALL SELF-LOCKING NUT.**

NOTE

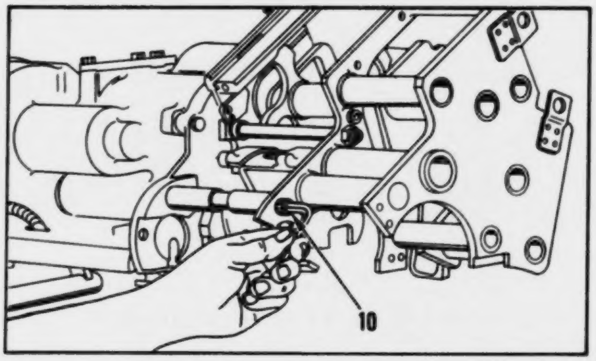
Do not back off self-locking nut after nut has been torqued (tightened). Threads of nut and standoff, and bearing surfaces of nut and feed assembly must be free of lubricant while applying torque.

a. Use torque wrench and 10-mm socket. Install new self-locking nut (8) on standoff (9). Torque nut (8) to 67 in.-lb +8 in.-lb (77 cmkg ±9 cmkg).



7. **INSTALL SPACER CAP SCREW.**

a. Use 6-mm hex key. Install and tighten lower right stepped spacer socket head cap screw (10).



NOTE

FOLLOW-ON MAINTENANCE: Install forward lower link stripper (para 2-29, Initial Setup and INSTALLATION). Install forward upper link stripper (para 2-28, Initial Setup and INSTALLATION). Install ejection chute assembly (para 2-32, Initial Setup and INSTALLATION). Install link shield (para 2-40, Initial Setup and INSTALLATION). Perform feeder manual cycle check (para 2-9). Install feeder assembly (para 2-27).

2-43. REMOVE/INSTALL ROUND POSITIONER ASSEMBLY 2-43

This task covers:
- a. Removal
- b. Inspection
- c. Lubrication
- d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Self-Locking Nut
12524617-1 (Fig. 5, Item 6, App C)

Personnel Required

45T Turret Mechanic
Helper

Troubleshooting References

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions

2-42 Forward feed assembly removed (Initial Setup and REMOVAL steps 1 thru 6)

General Safety Instructions

WARNING

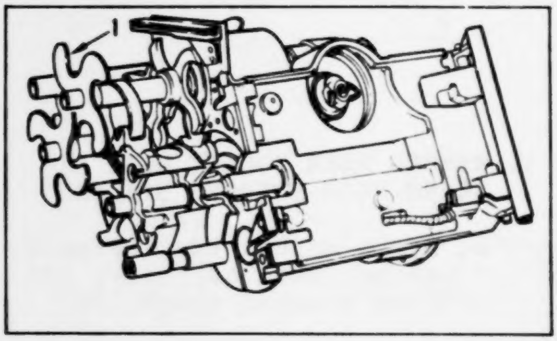
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly on a clean, flat surface with lower sprocket (1) on top as shown.



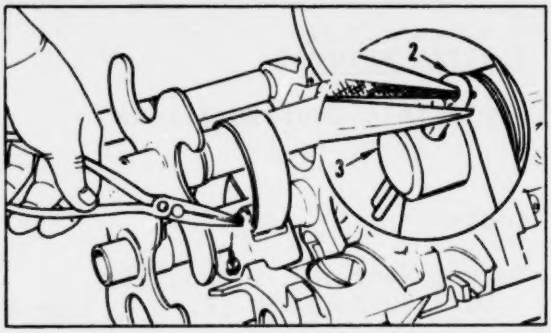
MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-43. REMOVE/INSTALL ROUND POSITIONER ASSEMBLY (cont) 2-43

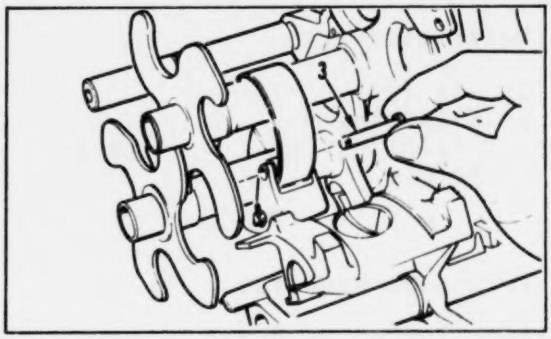
REMOVAL (cont)

2. **REMOVE ROUND POSITIONER UPPER PIN.**

   a. Use round-nose and duckbill pliers. Remove cotter pin (2) from round positioner upper pin (3). Discard cotter pin.

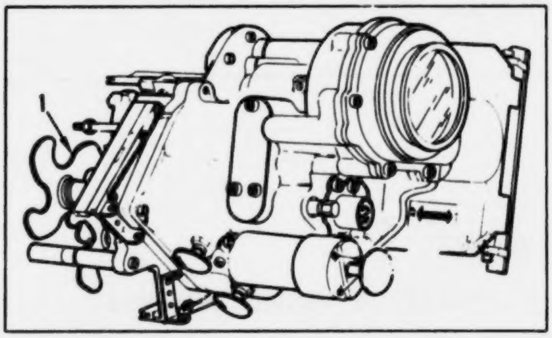


   b. Remove upper pin (3).



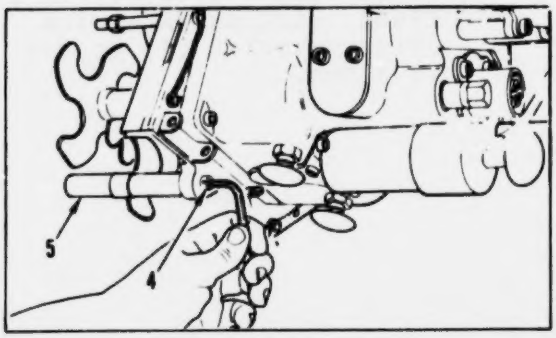
3. **POSITION FEEDER ASSEMBLY.**

   a. Place feeder assembly with lower sprocket (1) on bottom as shown.



4. **REMOVE REAR SOCKET HEAD CAP SCREW FROM STEPPED SPACER.**

   a. Use 6-mm hex key. Remove socket head cap screw (4) from stepped spacer (5).

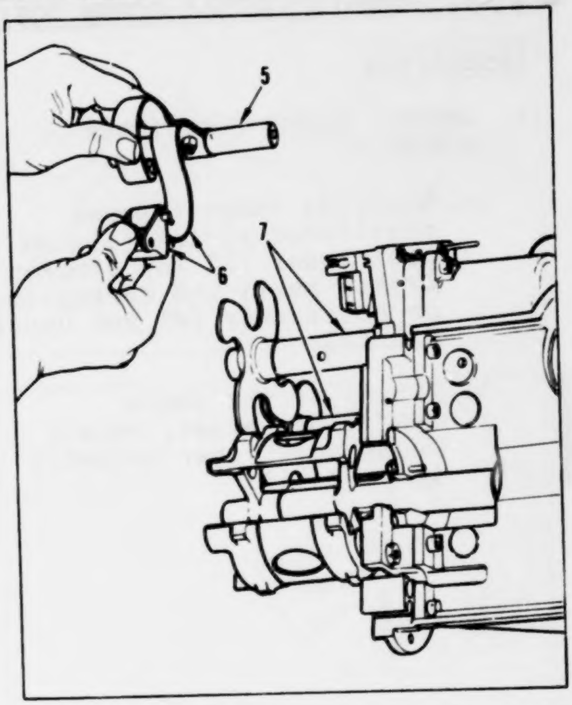


2-43. REMOVE/INSTALL ROUND POSITIONER ASSEMBLY

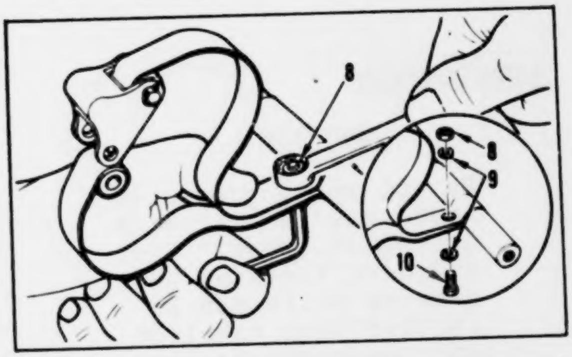
REMOVAL (cont)

5. **REMOVE ROUND POSITIONER ASSEMBLY.**

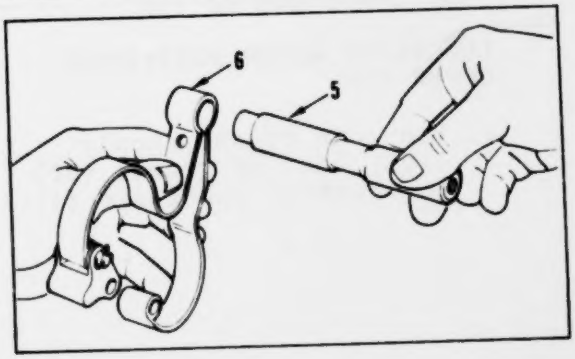
   a. Spread round positioner assembly (6). Pull round positioner assembly with stepped spacer (5) from around sprocket shafts (7).



   b. Use 5-mm hex key and 10-mm box wrench. Remove self-locking nut (8), two washers (9), and socket head cap screw (10). Discard nut (8).



   c. Slide stepped spacer (5) out of round positioner assembly (6).



MAINTENANCE OF FEEDER ASSEMBLY (cont)

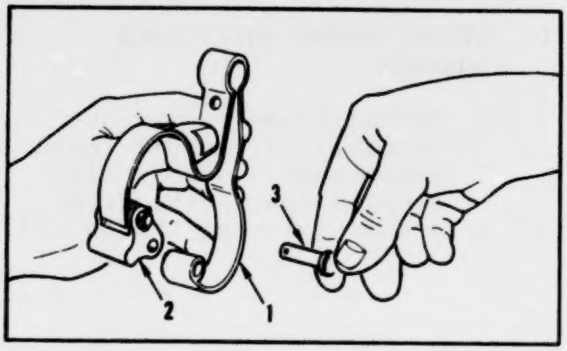
2-43. REMOVE/INSTALL ROUND POSITIONER ASSEMBLY (cont) 2-43

INSPECTION

1. **INSPECT ROUND POSITIONER ASSEMBLY.**

   a. Visually inspect round positioner spring (1) and positioner (2) for cracks, broken parts and corrosion on positioner (2) and upper pin (3).

   b. If any of the above conditions exist, repair round positioner assembly (para 2-44).



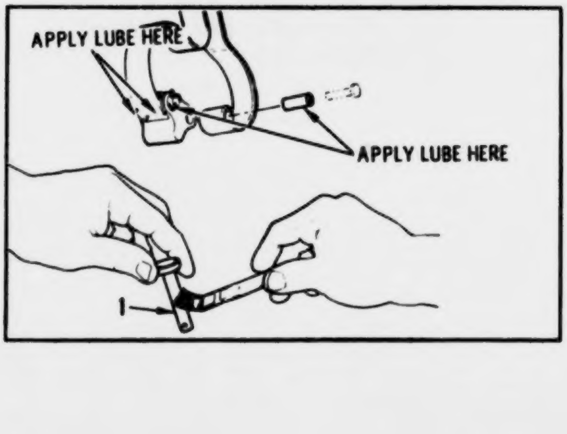
LUBRICATION

CAUTION

Do not apply grease on round positioner parts except as shown. Dust and dirt sticking to greased parts can be carried into receiver and cause gun to jam.

1. **LUBRICATE ROUND POSITIONER UPPER PIN.**

   a. Use acid brush. Apply light coat of grease (D2) to shank of upper pin (1).

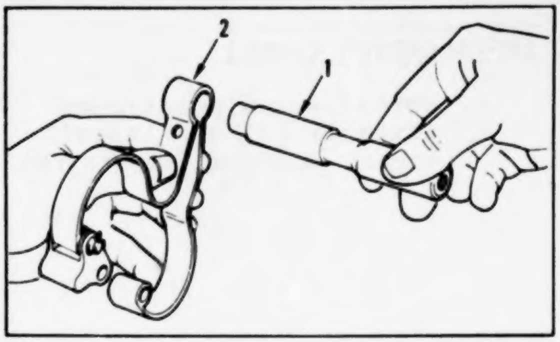


2-43. REMOVE/INSTALL ROUND POSITIONER ASSEMBLY 2-43

INSTALLATION

1. **INSTALL ROUND POSITIONER ASSEMBLY.**

   a. Slide stepped spacer (1) into round positioner assembly (2) as shown.

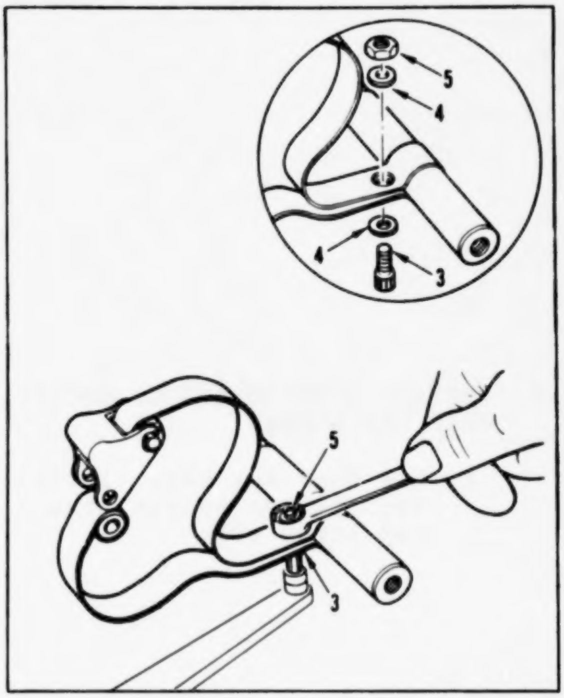


   b. Install socket head cap screw (3), washers (4), and new self-locking nut (5).

NOTE

Screw and nut threads, bearing surfaces of round positioner (at screw and nut), and nut and screw head must be free of lubricant while applying torque.

   c. Use 10-mm box wrench, torque wrench, and 5-mm socket wrench attachment. Torque socket head cap screw (3) to 67 in.-lb ±8 in.-lb (77 cmkg ±9 cmkg).

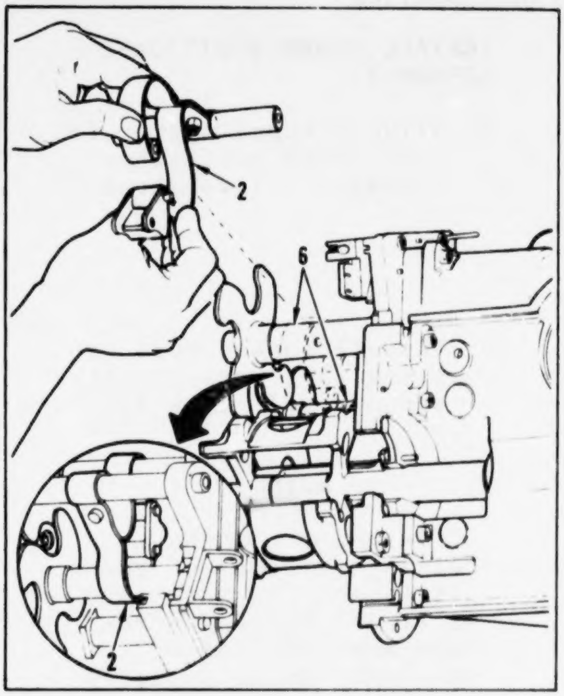


MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-43. REMOVE/INSTALL ROUND POSITIONER ASSEMBLY (cont) 2-43

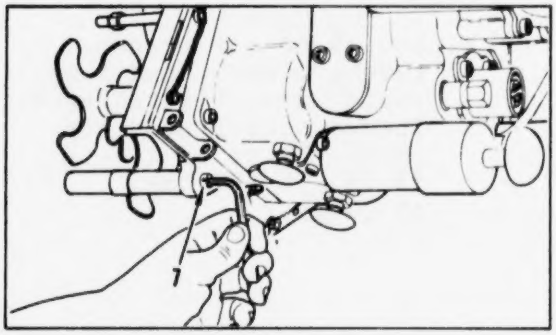
INSTALLATION (cont)

d. Spread round positioner assembly (2) and install around sprocket shafts (6).



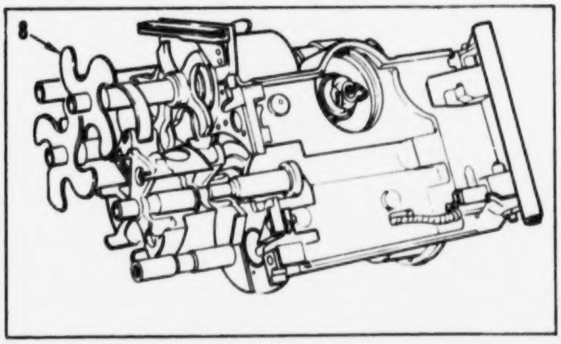
2. **INSTALL STEPPED SPACER SOCKET HEAD CAP SCREW.**

   a. Use 6-mm hex key. Install and tighten socket head cap screw (7).



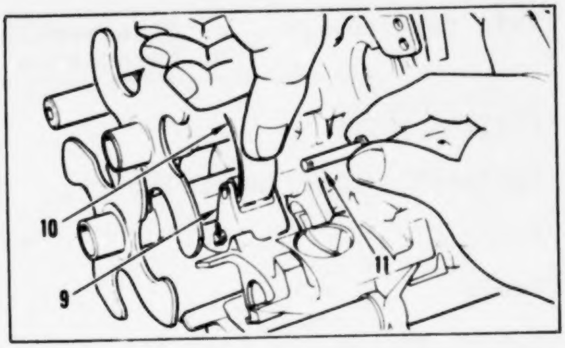
3. **POSITION DRIVE ASSEMBLY.**

   a. Place feeder assembly with lower sprocket (8) at top as shown.



2-43. REMOVE/INSTALL ROUND POSITIONER ASSEMBLY

INSTALLATION (cont)

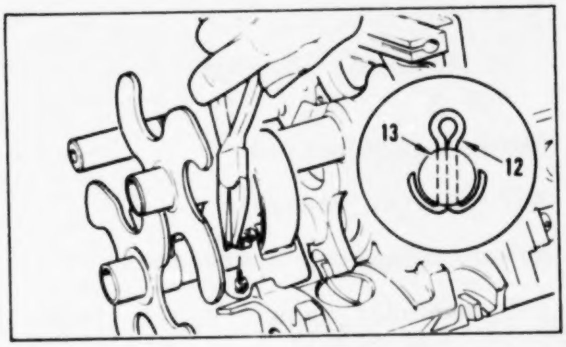


4. **INSTALL ROUND POSITIONER UPPER PIN.**

   a. Push positioner (9) and spring (10) together. Install round positioner upper pin (11).

   NOTE

   Use helper to hold and aline positioner and spring while pin is being installed.

   b. Use round-nose or duckbill pliers. Install new cotter pin (12) in upper pin (13).

   NOTE

   FOLLOW-ON MAINTENANCE: Install forward feed assembly (para 2-42, Initial Setup, INSTALLATION, and follow-on maintenance).

MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-44. REPAIR ROUND POSITIONER ASSEMBLY 2-44

This task covers:
- a. Disassembly
- b. Inspection
- c. Lubrication
- d. Assembly

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Cotter Pin
MS24665-132 (Fig. 5, Item 1, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-9 Feeder manual cycle check
2-14 Gun stalls

Equipment Conditions

2-42 Forward feed assembly removed (Initial Setup and REMOVAL steps 1 thru 6)
2-43 Round positioner removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

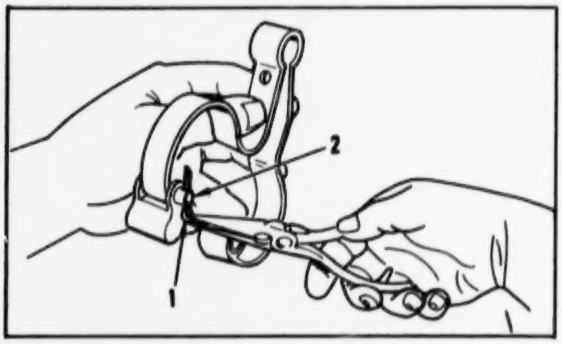
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

DISASSEMBLY

1. **REMOVE ROUND POSITIONER.**

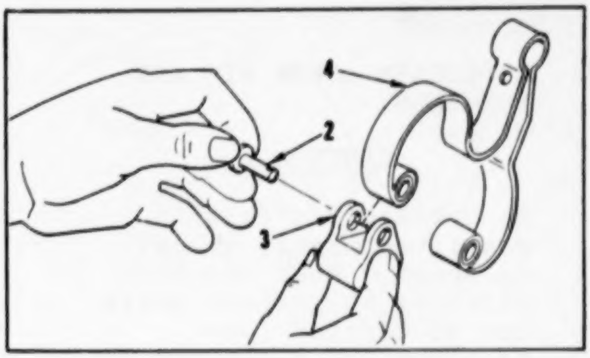
   a. Use round-nose pliers. Pull cotter pin (1) out of round positioner lower pin (2). Discard cotter pin.



2-44. REPAIR ROUND POSITIONER ASSEMBLY (cont) 2-44

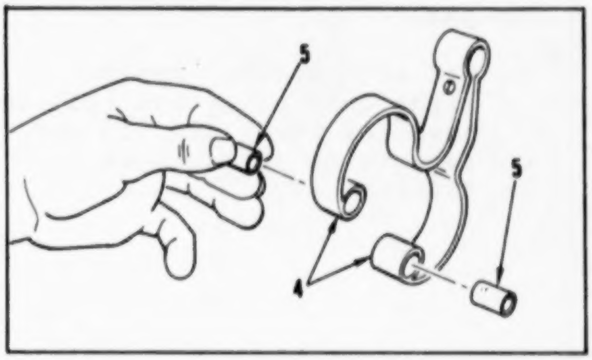
REMOVAL (cont)

b. Pull round positioner lower pin (2) out of positioner (3) and round positioner spring (4). Remove positioner (3).



2. **REMOVE BUSHINGS.**

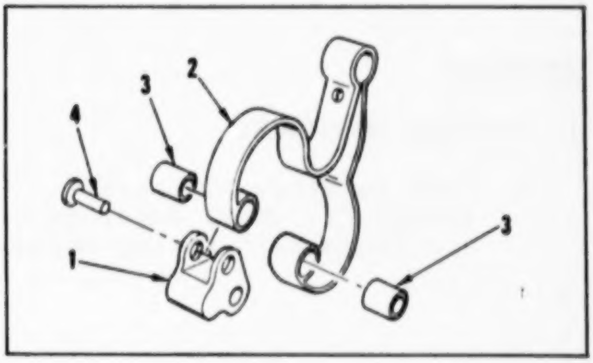
a. Remove two bushings (5) from positioner spring (4).



INSPECTION

1. **INSPECT ROUND POSITIONER ASSEMBLY PARTS.**

a. Visually inspect positioner (1) and round positioner spring (2) for cracks, chips, broken parts, and corrosion on positioner spring (2), bushing (3) and pin (4).



b. Visually inspect bushings (3) and round positioner lower pin (4) for galled condition.

c. If any of above conditions are found, get a new part. Repeat steps a, b, and c as required.

MAINTENANCE OF FEEDER ASSEMBLY (cont)

2-44. REPAIR ROUND POSITIONER ASSEMBLY (cont) 2-44

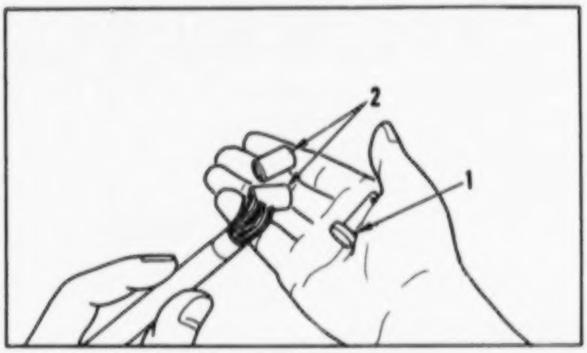
LUBRICATION

1. **LUBRICATE LOWER PIN AND BUSHINGS.**

CAUTION

Do not apply grease to positioner parts except as shown. Dust and dirt sticking to greased parts can be carried into receiver and cause gun to jam.

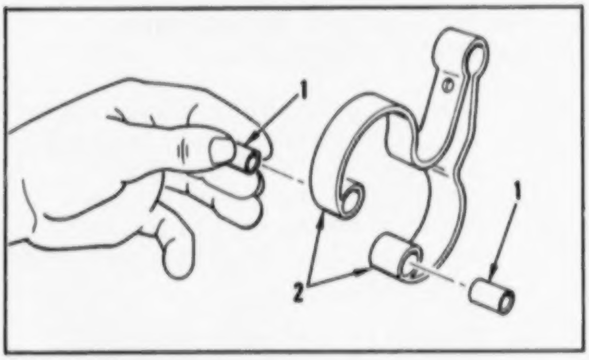
a. Use acid brush. Apply light coat of grease (D2) to shank of lower pin (1) and to outside surfaces of bushings (2).



ASSEMBLY

1. **INSTALL BUSHINGS.**

a. Push bushings (1) into spring (2) until bushings are flush with spring edges.

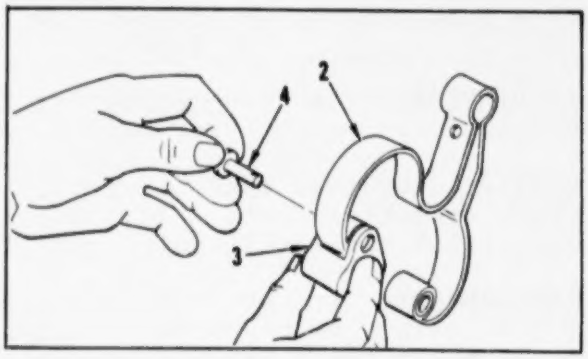


2-44. REPAIR ROUND POSITIONER ASSEMBLY (cont) 2-44

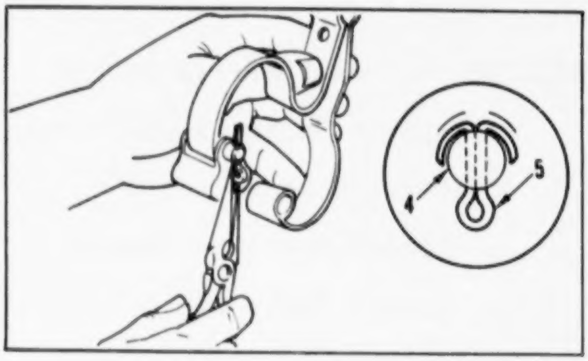
ASSEMBLY (cont)

2. **INSTALL POSITIONER.**

a. Place spring (2) in positioner (3) and install lower pin (4) through positioner and spring.



b. Use round-nose pliers. Install new cotter pin (5) in lower pin (4). Bend cotter-pin ends in opposite directions around pin (4) as shown.



NOTE

FOLLOW-ON MAINTENANCE: Install round positioner assembly (para 2-43, Initial Setup, INSTALLATION, and follow-on maintenance).

2-45. MAINTENANCE OF RECEIVER ASSEMBLY 2-45

This task covers: a. Inspection c. Replacement
b. Repair

INSPECTION: See Troubleshooting Symptom Index (para 2-7) and Receiver Manual Cycle Check (para 2-10).

REPAIR: Receiver assembly repair is indicated by inspection or troubleshooting (para 2-7). Repair of the receiver assembly at the organizational level consists of the tasks listed below.

REPLACEMENT: If the receiver assembly is damaged or unserviceable, and it cannot be repaired at organizational level, replace with a serviceable gun. Send unserviceable gun to Direct Support Maintenance.

RECEIVER ASSEMBLY REPAIR TASKS:	TASK PARAGRAPH	TROUBLESHOOTING PARAGRAPH REF
1. Replace Barrel Support Assembly	2-46	2-18
2. Repair Sear Solenoid	2-47	2-8, 2-13, 2-20
3. Replace Breech Assembly	2-48	2-14, 2-18
4. Replace Drive Shaft	2-49	2-19
5. Replace Latch-Track Hook	2-50	2-12, 2-17
6. Replace Handle Lock Pin	2-51	2-19
7. Replace Rear Track	2-52	2-12, 2-19
8. Replace Chain Sear Cover Assembly	2-53	2-13
9. Replace Chain Sear Catch Assembly	2-54	2-13
10. Replace Pivot Latch	2-55	2-12
11. Repair Chain Guides and Mechanical Interlock	2-56	2-11, 2-12, 2-17, 2-20

RECEIVER ASSEMBLY REPAIR TASKS:	TASK PARAGRAPH	TROUBLESHOOTING PARAGRAPH REF
12. Replace Sear Retractor Assembly	2-57	2-13
13. Remove/Install Bolt and Track Assembly	2-58	
14. Repair Bolt and Track Assembly	2-59	2-15
15. Repair Bolt and Carrier Assembly	2-60	2-10, 2-11, 2-12, 2-14, 2-15, 2-16, 2-17, 2-19, 2-20
16. Repair Track Assembly	2-61	2-10, 2-11, 2-12, 2-13, 2-15, 2-16, 2-17, 2-19, 2-20
17. Replace Recoil Mechanism	2-62	2-18
18. Remove/Install Sear Assembly	2-63	2-10, 2-13, 2-20
19. Replace 1.5 HP DC Motor	2-64	2-8, 2-10
20. Service Recoil Mechanism	2-65	2-18
21. Repair Receiver Clutch	2-66	
22. Repair Receiver Gears	2-67	

2-46. REPLACE BARREL SUPPORT ASSEMBLY 2-46

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

0.032-Inch Lock Wire (D1)
Grease (D2)
Barrel Support Assembly
12524350 (Fig. 6, Item 1, App C)
Cotter Pin
MS24665-132 (Fig. 6, Item 11, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-18 Excessive recoil or inadequate dampening

Equipment Conditions

2-62 Recoil mechanism removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

Wear eye protection when cutting lock wire or removing springs. You can be blinded if wire or spring hits you in the eye. Get medical help at once if wire or spring gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

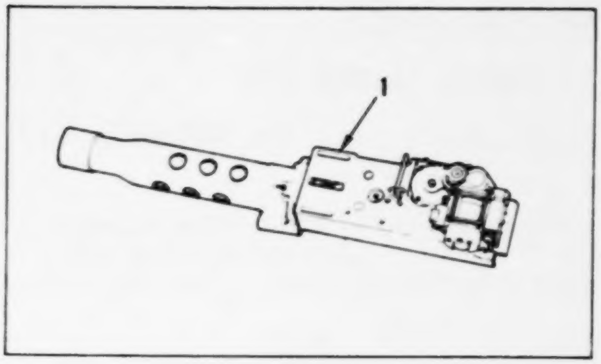
Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

2-46. REPLACE BARREL SUPPORT ASSEMBLY (cont) 2-46

REMOVAL

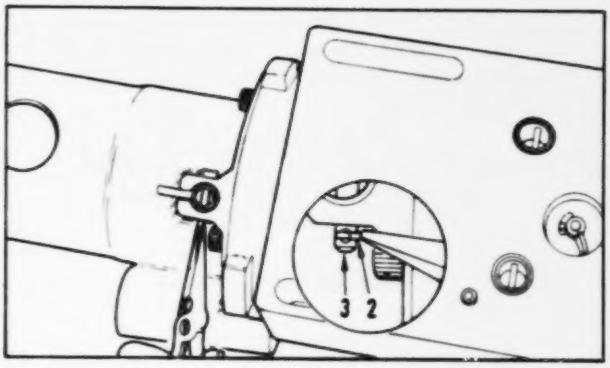
1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver (1) as shown.

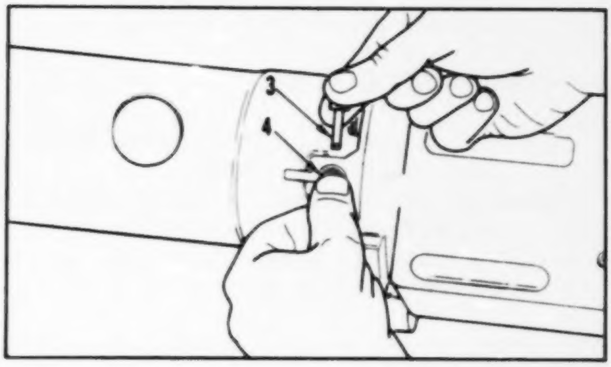


2. **REMOVE BARREL LOCK PIN.**

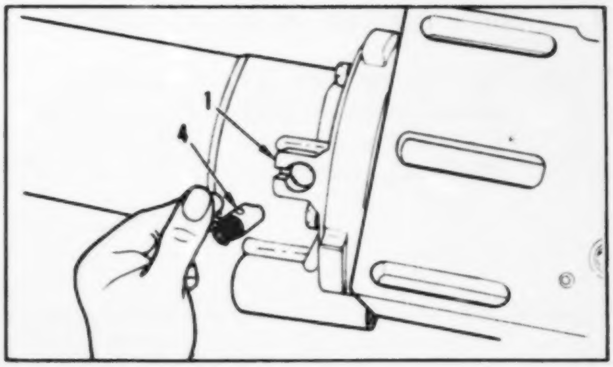
   a. Use round-nose pliers. Remove cotter pin (2) from pin (3). Discard cotter pin.



   b. Hold thumb over top of lock pin (4) to prevent loss of spring inside lock pin. Pull pin (3) out and allow lock pin spring to expand under thumb.



   c. Remove lock pin and spring (4) from receiver (1).



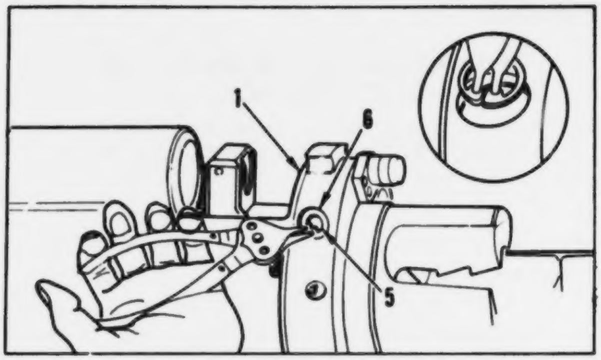
2-46. REPLACE BARREL SUPPORT ASSEMBLY (cont) 2-46

REMOVAL (cont)

3. **REMOVE BREECH KEY.**

   a. Place receiver assembly (1) as shown.

   b. Use retaining ring pliers. Remove retaining ring (5) from receiver hole (6).

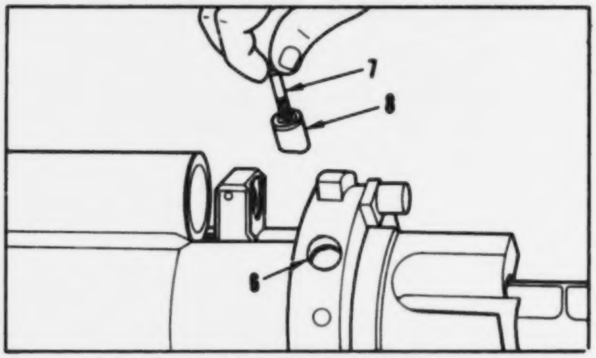


NOTE

To perform the following step, remove one 5mm socket head cap screw from any part of the gun.

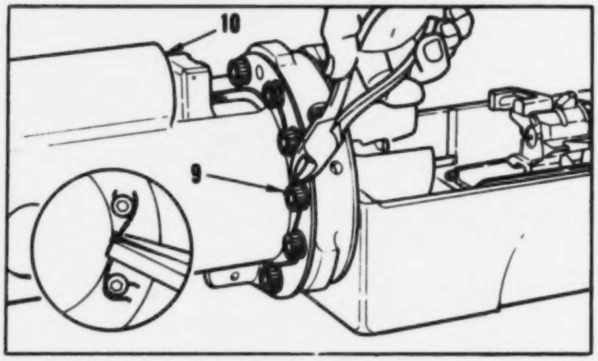
   c. Install 5-mm socket head cap screw (7) in breech key (8) three turns.

   d. Pull socket head cap screw (7) and breech key (8) straight out of hole (6). Remove breech key from socket head cap screw.



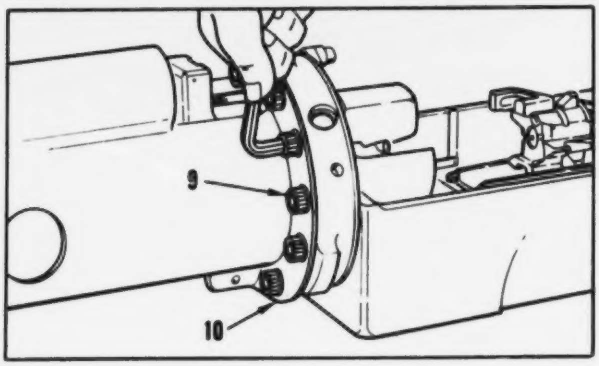
4. **REMOVE LOCK WIRE.**

   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from nine socket head cap screws (9) on barrel support (10). Discard lock wire.



5. **REMOVE SOCKET HEAD CAP SCREWS.**

   a. Use 6-mm hex key. Remove nine socket head cap screws (9) from flange of barrel support assembly (10).



2-46. REPLACE BARREL SUPPORT ASSEMBLY (cont) 2-46

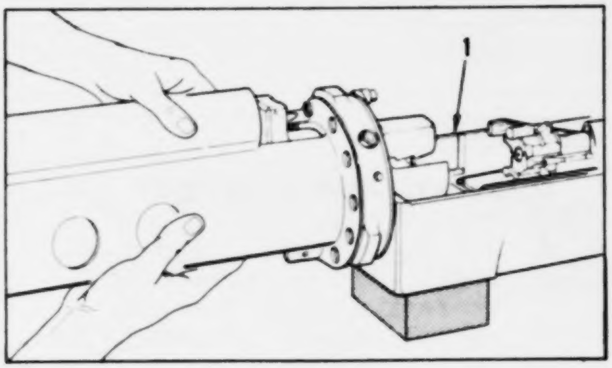
REMOVAL (cont)

NOTE

A block of wood placed under front of receiver will aid in removal of barrel support assembly.

6. **REMOVE BARREL SUPPORT ASSEMBLY.**

   a. Place block under front of receiver (1) as shown.

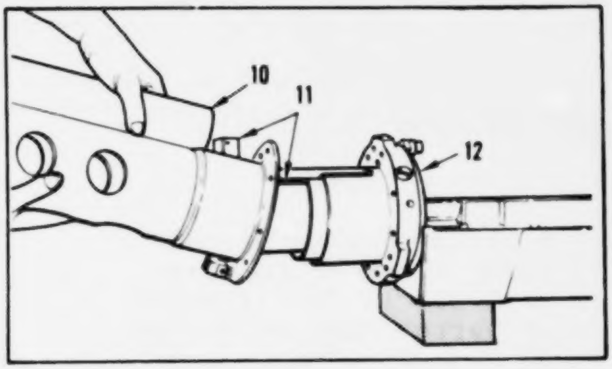


WARNING

Do not pull breech out of receiver more than eight inches when removing barrel support. If breech falls and hurts you, get medical help at once.

   b. Pull barrel support assembly (10) and breech (11) six inches away from receiver flange (12).

   c. Lift barrel support (10) over breech lug (11). Remove barrel support.

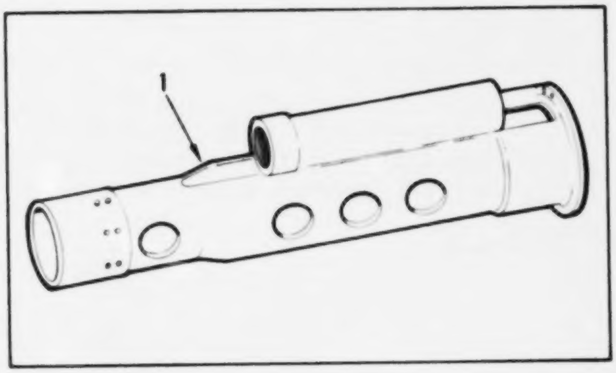


INSPECTION

1. **INSPECT BARREL SUPPORT ASSEMBLY AND RECEIVER ASSEMBLY.**

   a. Inspect barrel support assembly (1) for large dents, cracks, and loose rivets (six loose rivets together).

   b. Get a new barrel support assembly if above conditions are found. Repeat steps a and b.



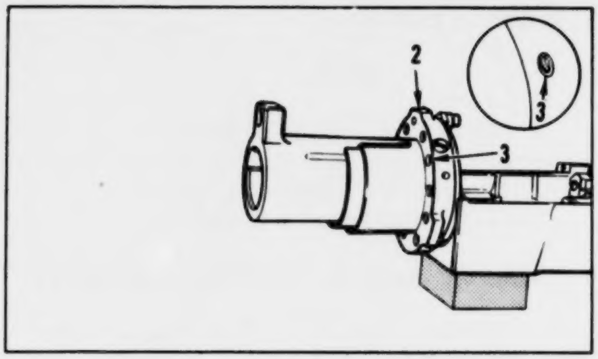
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-46. REPLACE BARREL SUPPORT ASSEMBLY (cont) 2-46

INSPECTION (cont)

c. Inspect screw thread inserts in receiver flange (2) screw holes (3).

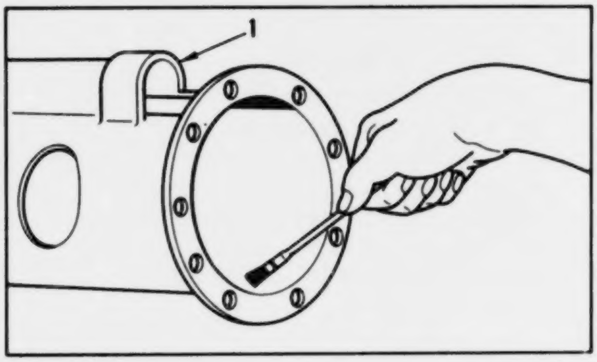
d. If receiver flange inserts are loose or damaged, notify Direct Support Maintenance.



LUBRICATION

1. **LUBRICATE BARREL SUPPORT.**

a. Use acid brush. Apply a light coat of grease (D2) to rear inside portion of barrel support assembly (1).



INSTALLATION

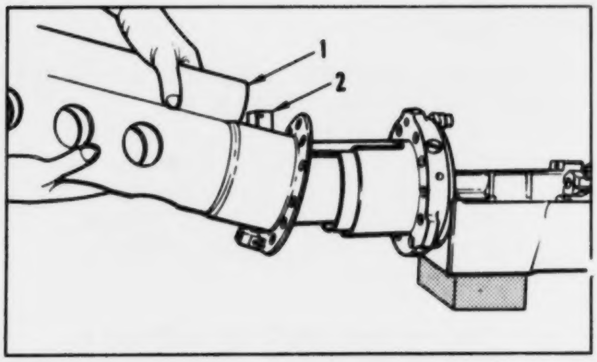
NOTE

A block of wood placed under front of receiver will aid in installation of barrel support assembly.

1. **INSTALL BARREL SUPPORT ASSEMBLY.**

a. Place block under front of receiver as shown.

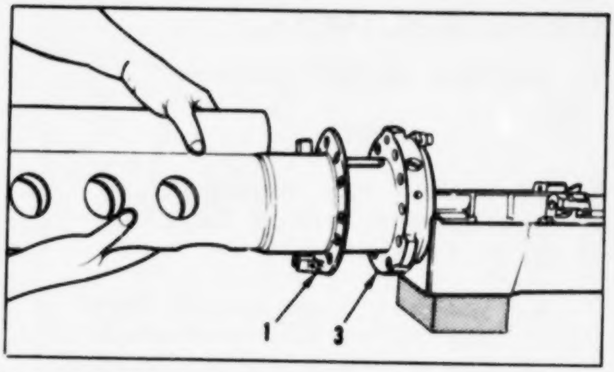
b. Install barrel support assembly (1) over breech lug (2). Slide breech lug out of barrel support slot.



2-46. REPLACE BARREL SUPPORT ASSEMBLY (cont) 2-46

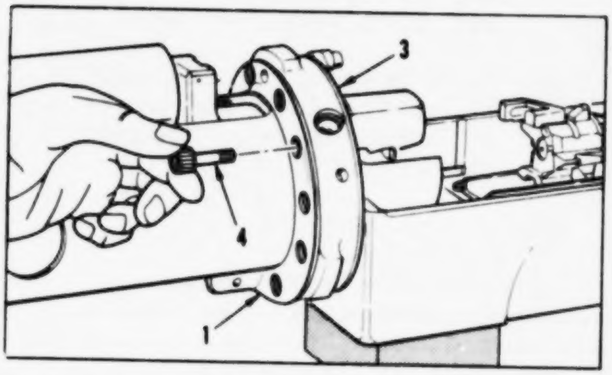
INSTALLATION (cont)

c. Push flange on barrel support assembly (1) against receiver flange (3).

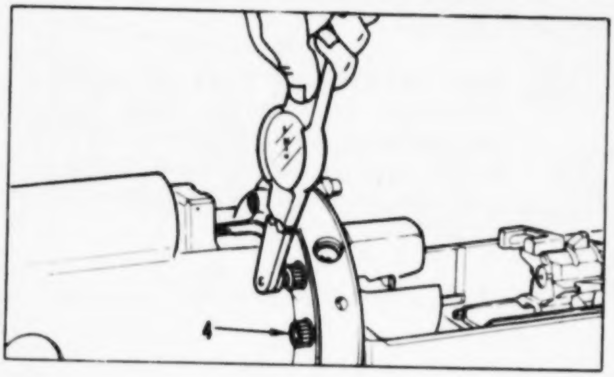


2. **INSTALL SOCKET HEAD CAP SCREWS.**

a. Install nine socket head cap screws (4) through flange of barrel support assembly (1) into receiver flange (3). Tighten cap screws (4) finger-tight.

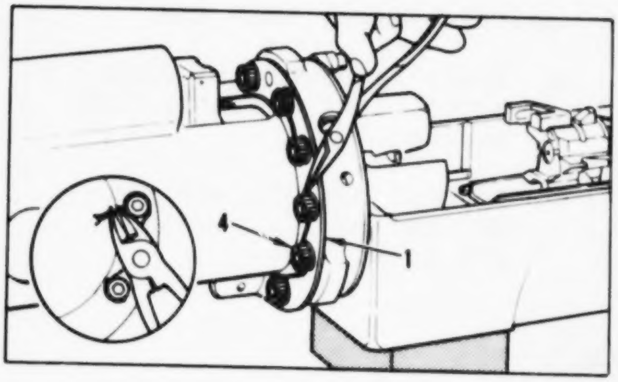


b. Use torque wrench and 6-mm socket wrench attachment. Torque seven socket head cap screws (4) to 160 in.-lb ±10 in.-lb (184 cmkg ±12 cmkg). Two socket head screws next to breech cannot be torqued due to lack of clearance for torque wrench. Tighten with 6-mm hex key.



3. **INSTALL LOCK WIRE ON SOCKET HEAD CAP SCREWS.**

a. Use duckbill pliers and diagonal-cutting pliers. Lockwire three socket head cap screws (4) on bottom and lower left side of barrel support flange (1). Lockwire other six cap screws in pairs.

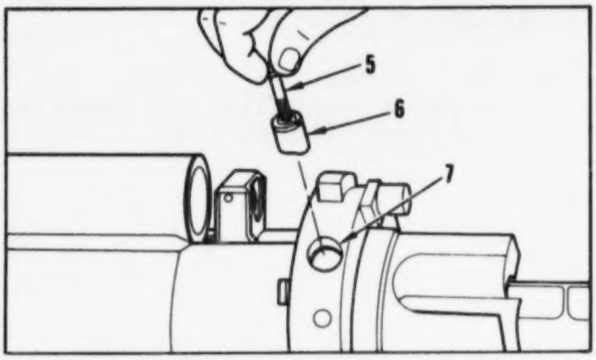


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-46. REPLACE BARREL SUPPORT ASSEMBLY (cont) 2-46

INSTALLATION (cont)

4. INSTALL BREECH KEY.



NOTE

If breech key does not seat, move breech from side to side.

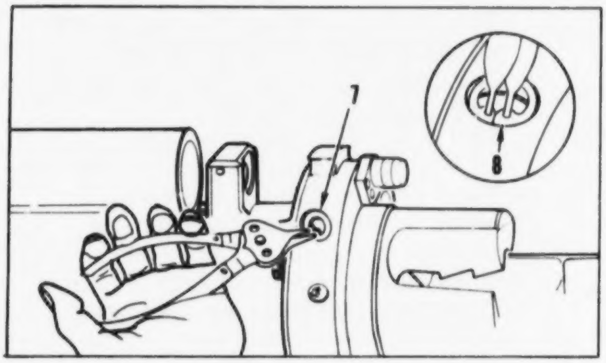
a. Install 5-mm socket head cap screw (5) in breech key (6) and insert breech key into receiver hole (7).

b. Turn breech key (6) until it slides down and seats in breech slot. Remove cap screw (5).

NOTE

Install the 5-mm socket head, removed in REMOVAL step 3, back to its originally installed position.

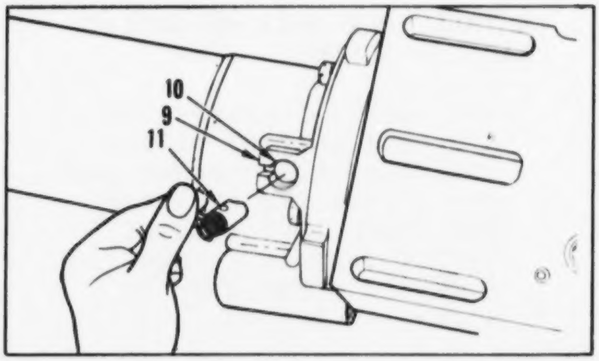
c. Use retaining ring pliers. Install retaining ring (8) in groove inside receiver hole (7). Make sure ring (8) is seated securely in groove.



5. INSTALL BARREL LOCK PIN.

a. Place receiver (9) with barrel lock pin hole (10) on top.

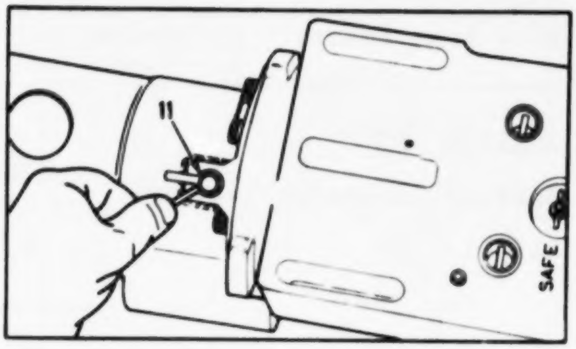
b. Install barrel lock pin and spring (11) in lock pin hole (10).



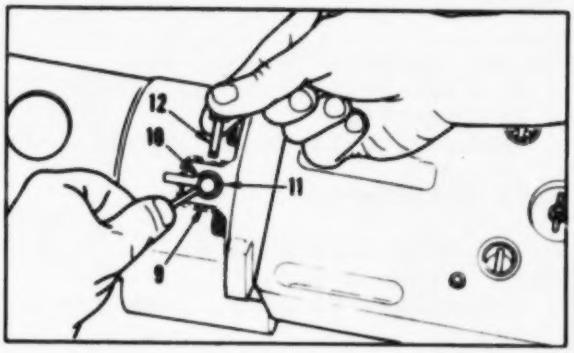
2-46. REPLACE BARREL SUPPORT ASSEMBLY (cont) 2-46

INSTALLATION (cont)

c. Use 3/32-inch drive pin punch. Compress spring of barrel lock pin (11); hold spring compressed for next step.

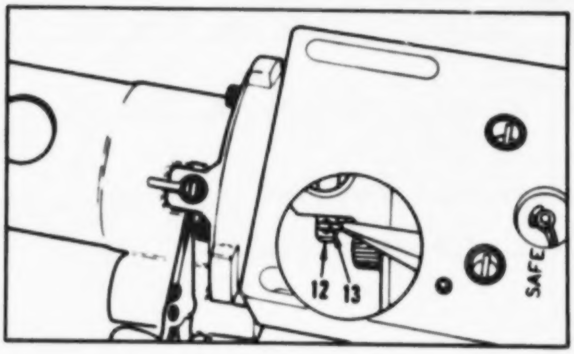


d. Install pin (12) across lock pin hole (10) in receiver (9). Pin must be installed over compressed spring of lock pin (11). Remove drive pin punch and push pin (12) through receiver (9) until it stops.



6. **INSTALL COTTER PIN.**

a. Use round-nose pliers. Insert new cotter pin (13) through hole in pin (12). Bend each end of cotter pin (13) around sides of pin (12).



NOTE

FOLLOW-ON MAINTENANCE: Install recoil mechanism (para 2-62, Initial Setup, INSTALLATION, and follow-on maintenance).

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-47. REPAIR SEAR SOLENOID 2-47

This task covers:
- a. Removal
- b. Inspection
- c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
  SC 5180-95CLB19 (Item 1, App B)
Multimeter,
  ANURM 105C (Item 2, App B)

Materials/Parts

0.032-Inch Lock Wire (D1)
Sear Solenoid Body
  12524419-1 (Fig. 6, Item 21, App C)
Sear Solenoid Plunger
  12524419-2 (Fig. 6, Item 22, App C)
Cotter Pin
  MS24665-132 (Fig. 6, Item 11, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-8	Electrical checkout
2-13	Gun will not stop in sear position
2-20	Gun fires without hangfire protection

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

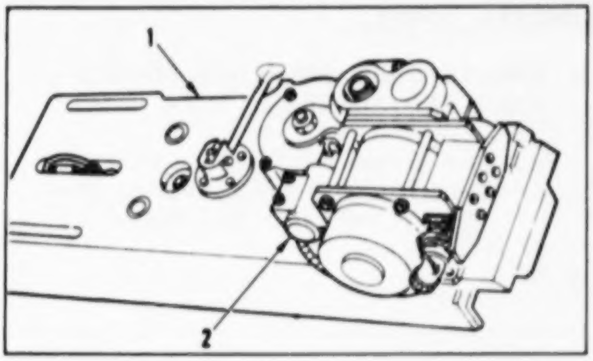
Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

2-47. REPAIR SEAR SOLENOID (cont) 2-47

REMOVAL

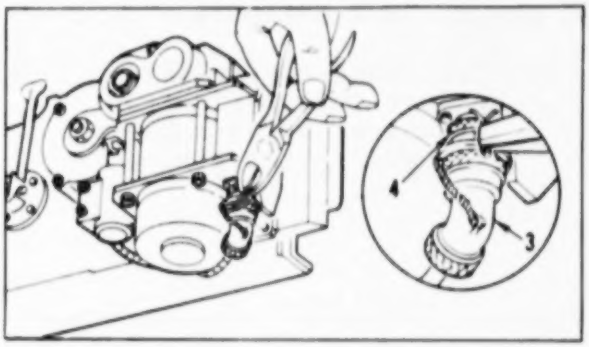
1. **PLACE RECEIVER ASSEMBLY ON A CLEAN FLAT SURFACE.**

   a. Position receiver assembly (1) with sear solenoid (2) on top as shown.



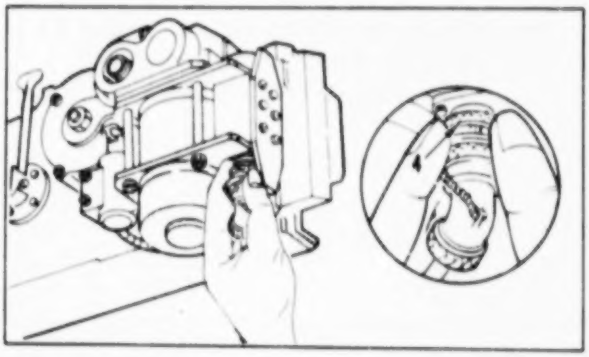
2. **REMOVE LOCK WIRE FROM SEAR SOLENOID ELECTRICAL CONNECTOR.**

   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from between solenoid electrical connector (3) and connector lock ring (4).

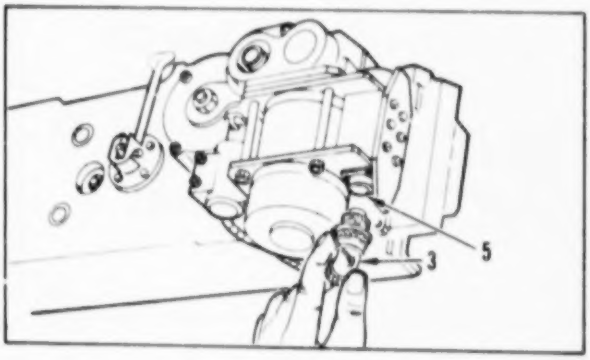


3. **DISCONNECT SEAR SOLENOID ELECTRICAL CONNECTOR.**

   a. Turn lock ring (4) counterclockwise until free.



   b. Pull electrical connector (3) straight out until disconnected from motor plug (5).



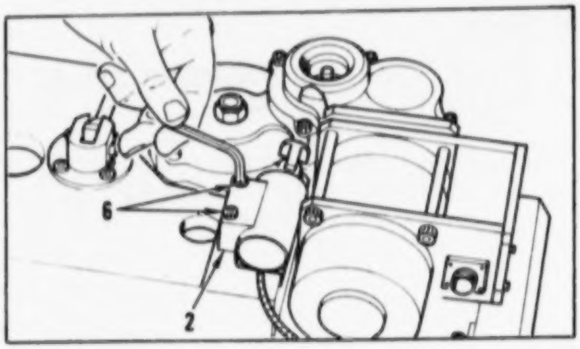
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-47. REPAIR SEAR SOLENOID (cont) 2-47

REMOVAL (cont)

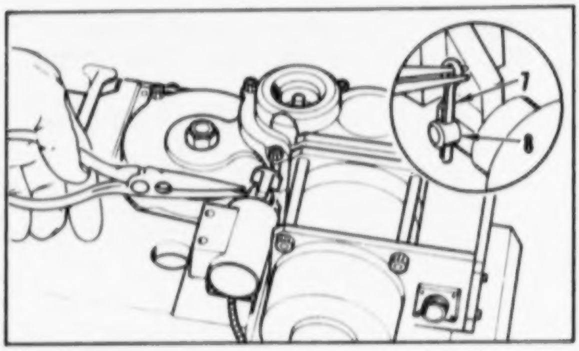
4. **REMOVE SEAR SOLENOID SOCKET HEAD CAP SCREWS.**

   a. Use 5-mm hex key. Remove two socket head cap screws (6) from sear solenoid (2).

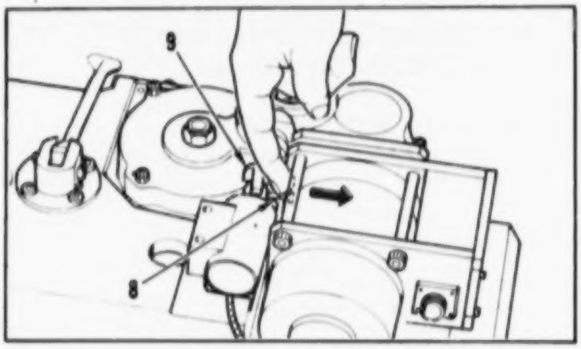


5. **REMOVE SEAR SOLENOID.**

   a. Use round-nose pliers. Remove cotter pin (7) from sear release pin (8). Discard cotter pin.

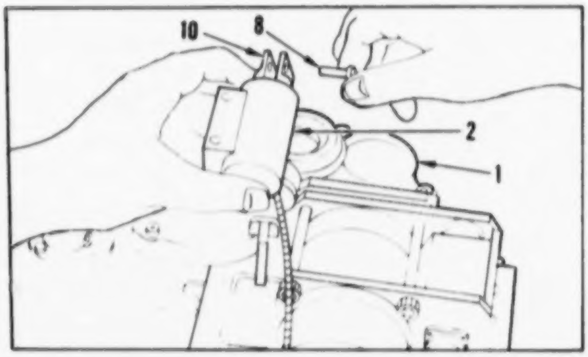


   b. Slide sear release pin (8) out of sear release link (9) until it stops.



   c. Lift sear solenoid (2) from receiver (1).

   d. Pull sear release pin (8) out of solenoid plunger clevis in (10).

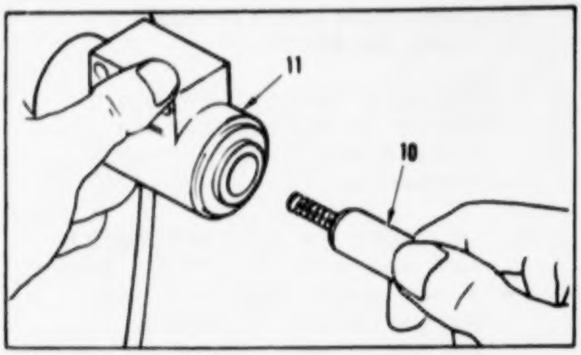


2-47. REPAIR SEAR SOLENOID (cont) 2-47

REMOVAL (cont)

6. **REMOVE PLUNGER ASSEMBLY.**

   a. Pull plunger (10) out of sear solenoid body (11). Do not discard plunger (10).



INSPECTION

1. **INSPECT SEAR SOLENOID.**

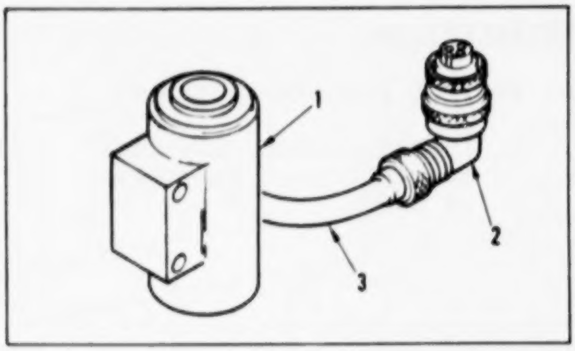
   a. Visually inspect body (1) for cracks, dents, broken or bent cable connector (2), and for damaged cable (3).

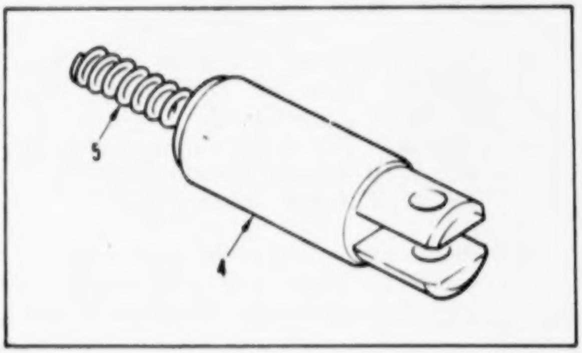
   b. Visually inspect plunger assembly (4) for corrosion, dents, bends, and damaged spring (5).

   c. If any of above conditions are found, get a new sear solenoid body (1). Repeat steps a and b as required.

   d. If corrosion is found, remove with very fine sand paper.

   e. If spring (5) is damaged, get a new plunger assembly (4).

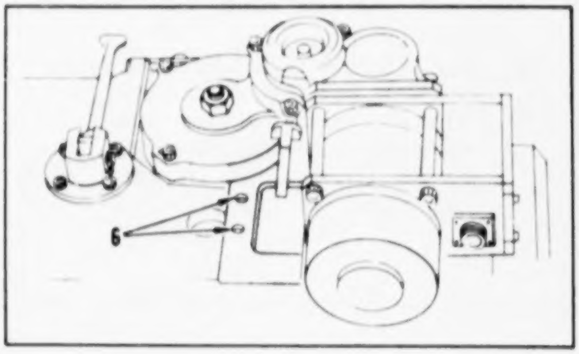




2. **INSPECT RECEIVER ASSEMBLY.**

   a. Visually inspect sear solenoid screw thread inserts (6) for looseness and damage.

   b. If any of the above conditions exist, forward gun to Direct Support Maintenance.



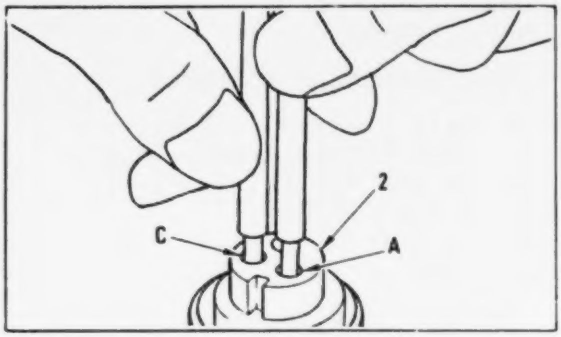
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-47. REPAIR SEAR SOLENOID (cont) 2-47

3. PERFORM CONTINUITY CHECK ON SEAR SOLENOID.

a. Use multimeter. Place leads of multimeter in pins A and C on connector (2).

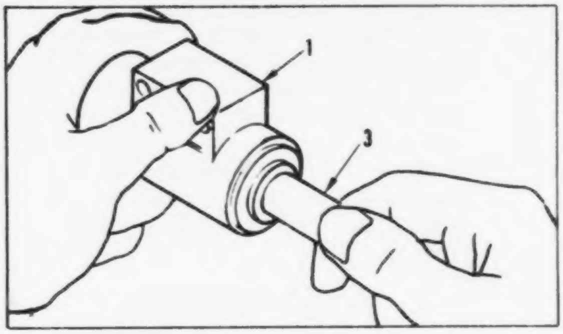
b. If there is no continuity between pins A and C, get a new sear solenoid body. Repeat steps a. and b. as required.



INSTALLATION

1. INSTALL PLUNGER ASSEMBLY.

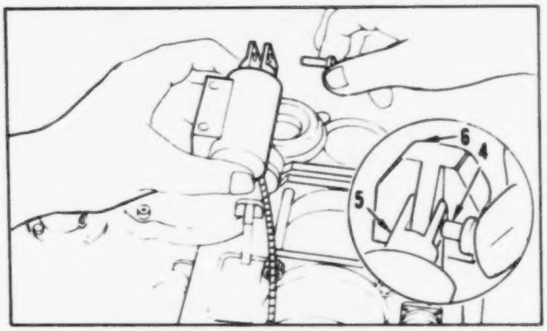
a. Insert plunger (3) into sear solenoid body (1) as shown.



2. INSTALL SEAR SOLENOID.

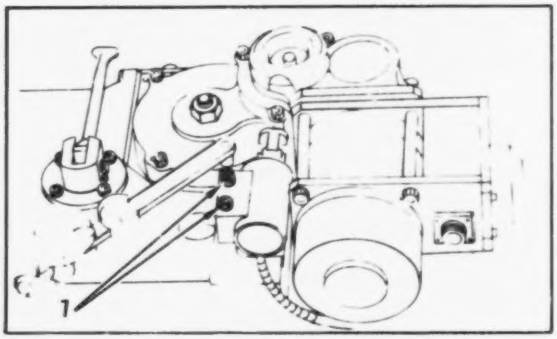
a. Install sear release pin (4) in side of solenoid plunger clevis (5) as shown. Hold pin (4) and slide plunger clevis over sear release link (6).

b. Push sear release pin (4) through sear release link (6) and plunger clevis (5).



3. INSTALL SOCKET HEAD CAP SCREWS.

a. Use torque wrench and 5-mm socket wrench attachment. Install and torque two socket head cap screws (7) to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).



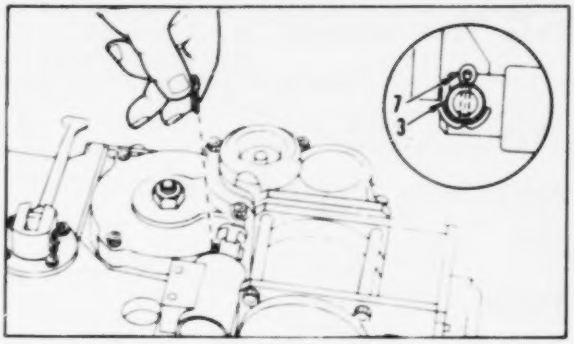
2-47. REPAIR SEAR SOLENOID (cont) 2-47

INSTALLATION (cont)

4. **INSTALL COTTER PIN.**

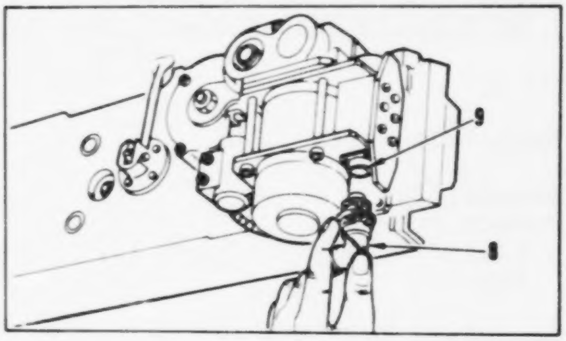
   a. Use round-nose pliers. Install new cotter pin (7) in sear release pin (3).

   b. Bend each end of cotter pin (7) around sides of sear release pin (3) as shown.

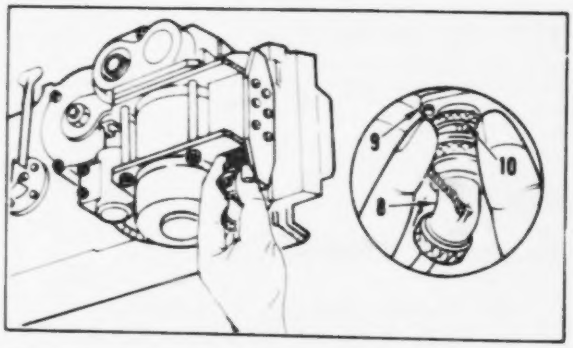


5. **CONNECT SEAR SOLENOID ELECTRICAL CONNECTOR.**

   a. Mate sear solenoid connector (8) with motor plug (9). Push connector in gently until seated.

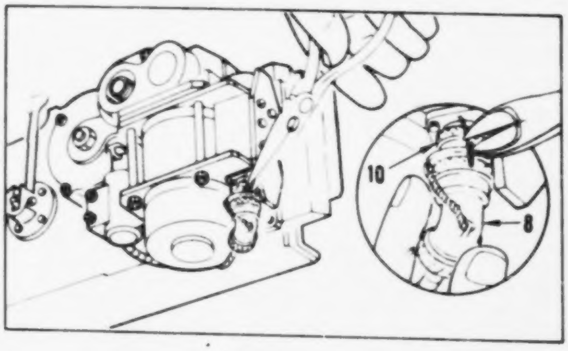


   b. Push connector (8) into motor plug (9) while turning lockring (10) clockwise. Turn lockring (10) clockwise until snug.



6. **INSTALL LOCK WIRE ON SEAR SOLENOID ELECTRICAL CONNECTOR.**

   a. Use round-nose pliers and diagonal-cutting pliers. Lockwire sear solenoid electrical connector (8) to connector lock ring (10). Discard wire pieces.



MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-48. REPLACE BREECH ASSEMBLY 2-48

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Breech Assembly
12524370 (Fig. 6, Item 15, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-14 Gun stalls
2-18 Excessive recoil or inadequate dampening

Equipment Conditions

2-46 Barrel support removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

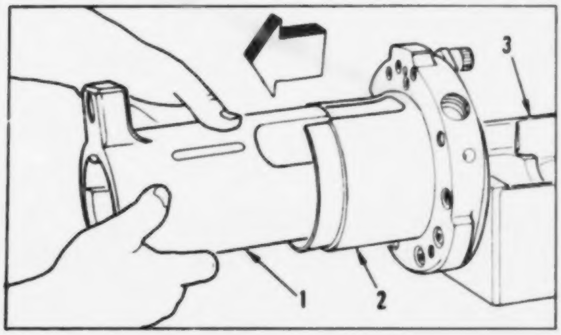
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

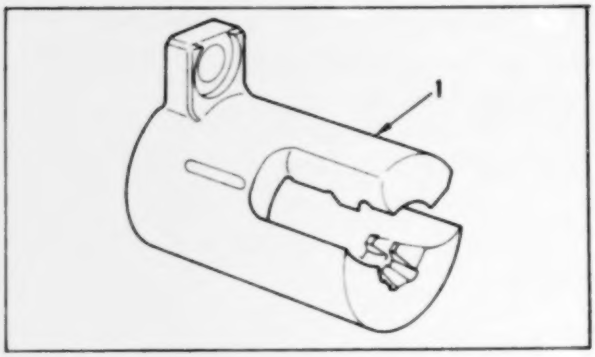
1. **REMOVE BREECH ASSEMBLY.**

   a. Slide breech assembly (1) out of breech sleeve (2) in receiver (3).



2-48. REPLACE BREECH ASSEMBLY (cont) 2-48

INSPECTION

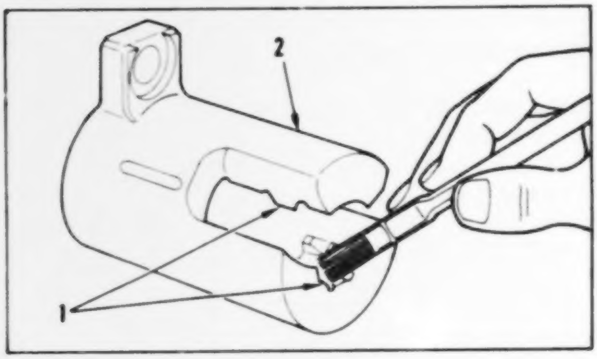


1. **INSPECT BREECH ASSEMBLY.**

   a. Visually inspect breech assembly (1) for cracks and breaks.

   b. Get a new breech assembly if above conditions are found. Repeat steps a and b.

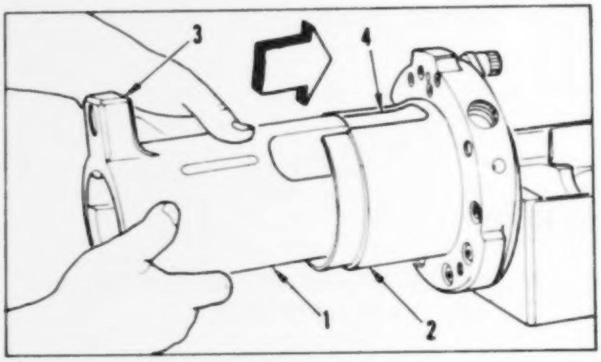
LUBRICATION



1. **LUBRICATE BREECH ASSEMBLY.**

   a. Use acid brush. Apply a heavy coat of grease (D2) to all locking lugs (1). Apply a light coat of grease to outside surfaces of breech (2).

INSTALLATION



1. **INSTALL BREECH ASSEMBLY.**

   a. Slide breech assembly (1) into breech sleeve (2). Pass breech lug (3) into slot (4) in breech sleeve (2). Push breech (1) into breech sleeve (2) as far as it will go.

NOTE

FOLLOW-ON MAINTENANCE: Install barrel support assembly (para 2-46, Initial Setup, INSTALLATION, and follow-on maintenance).

2-49. REPLACE DRIVE SHAFT 2-49

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Drive Shaft
12524302 (Fig. 6, Item 26, App C)
Retaining Ring
M27426-2105D (Fig. 6, Item 17, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-19 Gun fires at irregular rate

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

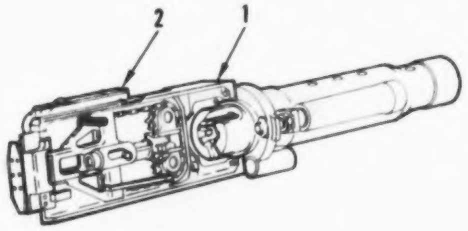
Do not wear jewelry when working on gun.

Keep fingers away from moving parts of gun.

REMOVAL

1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver assembly (1) with chain sear cover plate (2) on top as shown.



2-49. REPLACE DRIVE SHAFT (cont) 2-49

REMOVAL (cont)

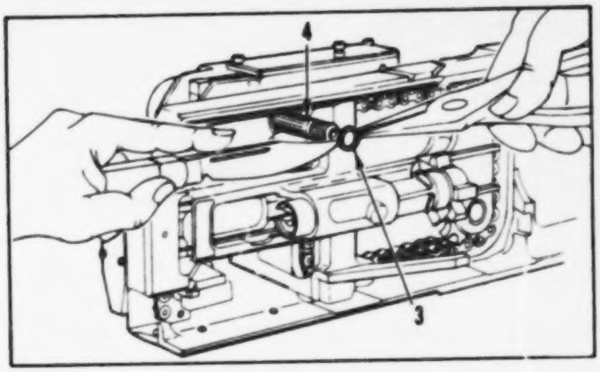
2. **REMOVE DRIVE SHAFT.**

WARNING

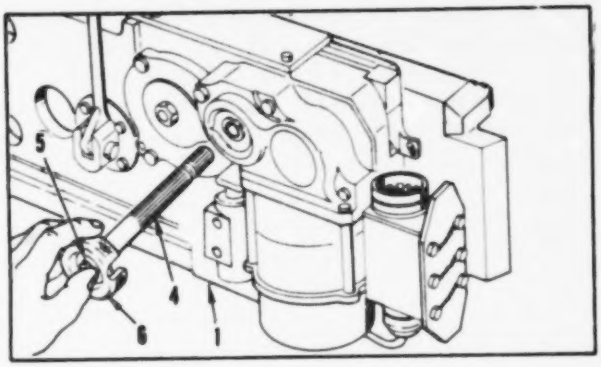
Wear eye protection when removing retaining ring. Hold knife securely to prevent blade slippage and possible injury.

a. Use knife and round-nose pliers. Remove retaining ring (3) from drive shaft (4).

b. Discard retaining ring (3).



c. Press button (5) in center of drive shaft handle (6). Pull drive shaft (4) from bottom of receiver (1).

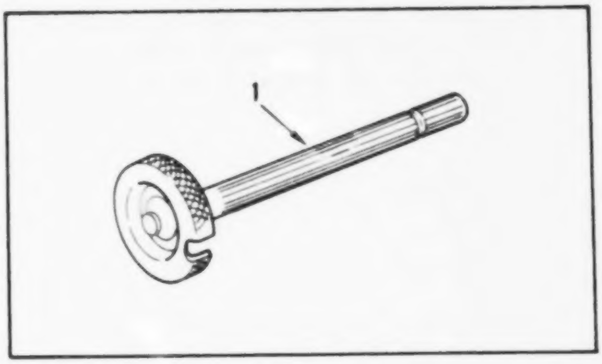


INSPECTION

1. **INSPECT DRIVE SHAFT.**

a. Visually inspect drive shaft (1) for bends and cracks.

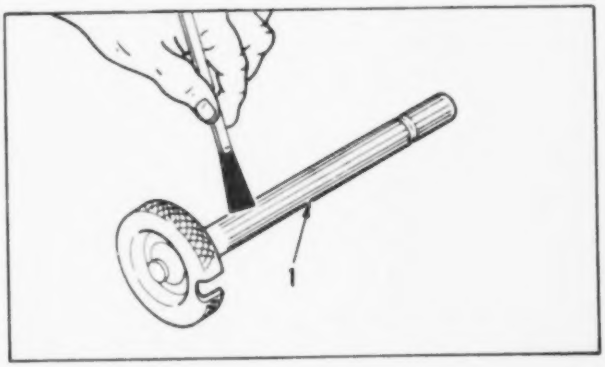
b. Get a new drive shaft if above conditions are found. Repeat steps a and b.



LUBRICATION

1. **LUBRICATE DRIVE SHAFT.**

a. Apply light coat of grease (D2) to entire length of drive shaft (1) splines.

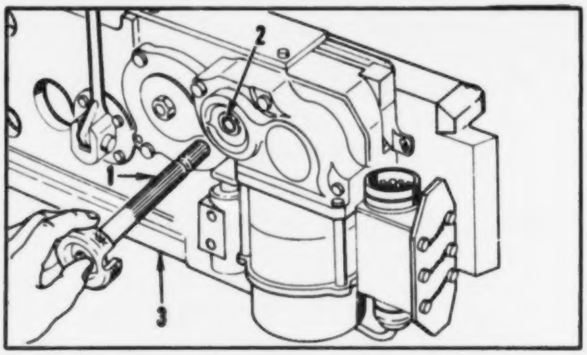


2-49. REPLACE DRIVE SHAFT (cont) 2-49

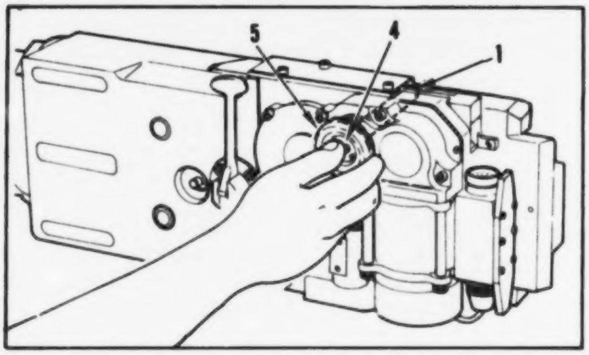
INSTALLATION

1. **INSTALL DRIVE SHAFT.**

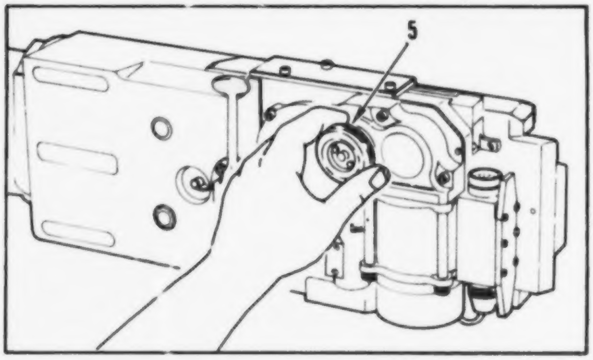
   a. Insert small end of drive shaft (1) in opening (2) in bottom of receiver assembly (3).



   b. Push drive shaft (1) in as far as it will go. Push button (4) in center of drive shaft handle (5). Release button (4).



   c. Pull on drive shaft handle (5) to make sure that drive shaft is locked in place.

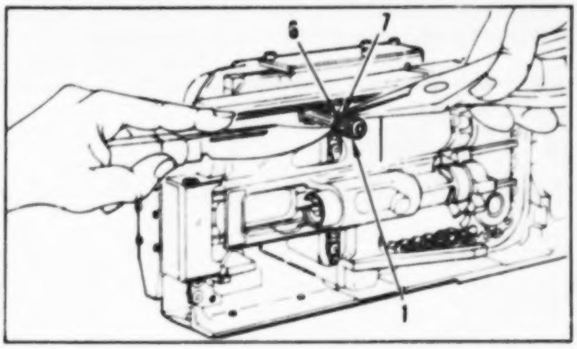


2-49. REPLACE DRIVE SHAFT (cont) 2-49

WARNING

Hold knife securely to prevent blade slippage and possible injury.

d. Use knife and round-nose pliers. Install new retaining ring (6) in groove (7) on drive shaft (1).



NOTE

FOLLOW-ON MAINTENANCE: Perform receiver manual cycle check (para 2-10).

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-50. REPLACE LATCH-TRACK HOOK 2-50

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Cotter Pin
MS24665-283 (Fig. 6, Item 2, App C)
Headed Straight Pin
MS9466-19 (Fig. 6, Item 52, App C)
Latch-Track Hook
12524308 (Fig. 6, Item 51, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-12 Gun will not fire
2-17 Gun fires intermittently

Equipment Conditions

2-58 Bolt and track assembly removed

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

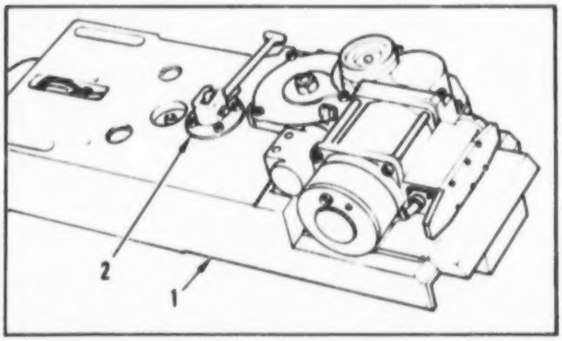
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

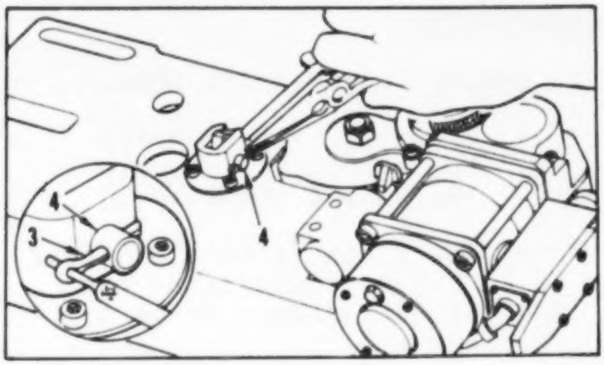
   a. Position receiver assembly (1) with latch pivot (2) on top as shown.



2-50. REPLACE LATCH-TRACK HOOK (cont) 2-50

REMOVAL (cont)

2. **REMOVE LATCH-TRACK HOOK AND WASHER.**

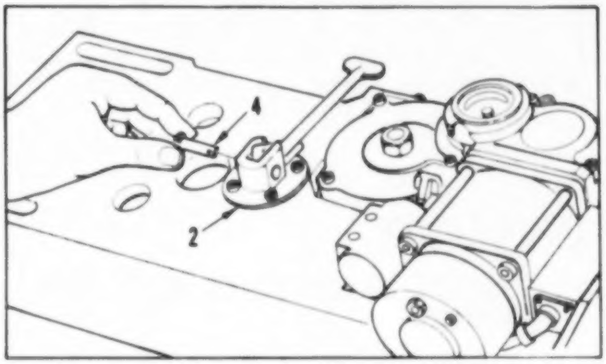


NOTE

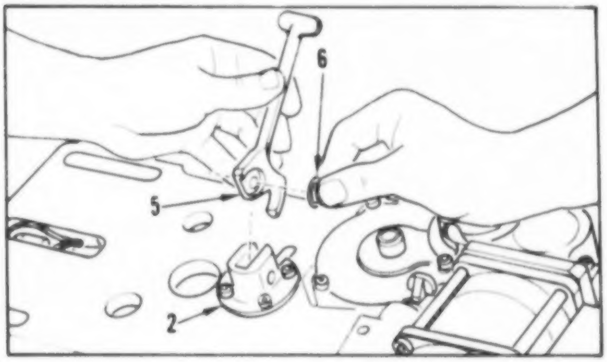
Use drive pin punch to keep latch-track pin from turning while straightening cotter pin ends.

a. Use round-nose pliers and 3/32-inch drive pin punch. Remove cotter pin (3) from latch-track pin (4). Discard cotter pin.

b. Pull latch-track pin (4) from latch pivot (2). Discard pin.



c. Lift latch-track hook (5) and washer (6) from latch pivot (2).



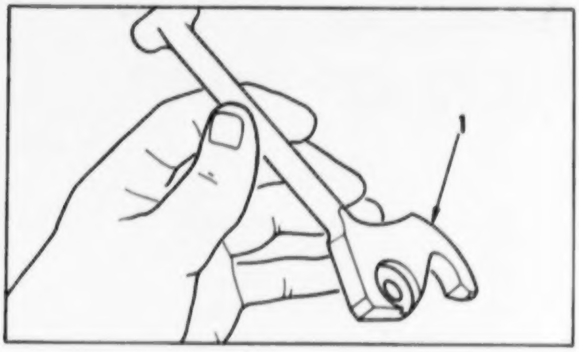
2-50. REPLACE LATCH-TRACK HOOK (cont) 2-50

INSPECTION

1. **INSPECT LATCH-TRACK HOOK.**

   a. Visually inspect latch-track hook (1) for cracks, bends, and breaks.

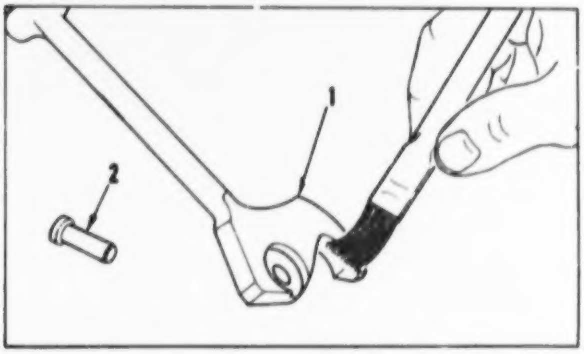
   b. Get a new latch-track hook if above conditions are found. Repeat steps a and b.



LUBRICATION

1. **LUBRICATE LATCH-TRACK HOOK AND PIN.**

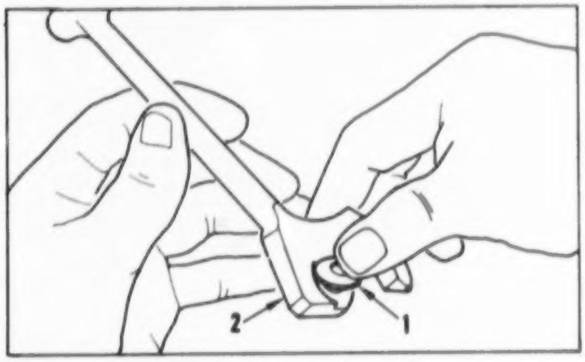
   a. Use acid brush. Apply light coat of grease (D2) to latch-track hook (1) as shown, and to new latch-track pin (2).



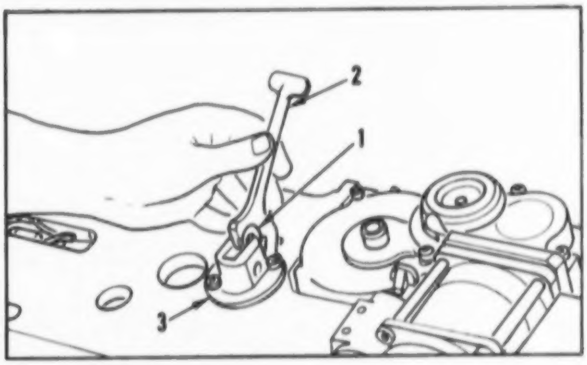
INSTALLATION

1. **INSTALL LATCH-TRACK HOOK AND WASHER.**

   a. Place washer (1), with dome facing out, on latch-track hook (2). Hold washer (1) in position.

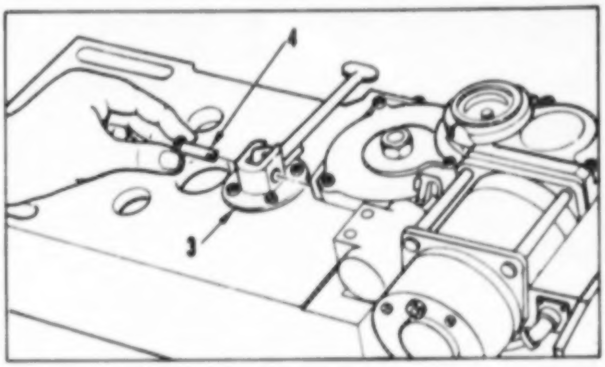


   b. Place latch-track hook (2) and washer (1) into latch pivot (3) as shown. Aline pin holes.



2-50. REPLACE LATCH-TRACK HOOK (cont) 2-50

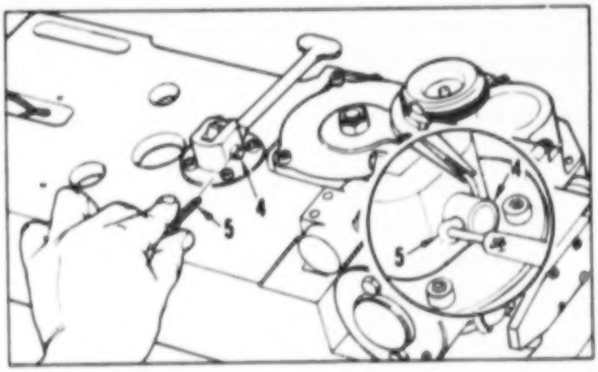
INSTALLATION (cont)



c. Push new latch-track pin (4) into latch pivot (3) from left as shown.

NOTE

Use drive pin punch to keep latch-track pin from turning while bending cotter pin ends.



d. Install new cotter pin (5) in latch-track pin (4).

e. Use round-nose pliers. Bend ends of cotter pin (5), in opposite directions, around latch-track pin (4).

2. **INSTALL BOLT AND TRACK ASSEMBLY** (para 2-58).

NOTE

FOLLOW-ON MAINTENANCE: Perform receiver manual cycle check (para 2-10).

2-51. REPLACE HANDLE LOCK PIN 2-51

This task covers:
- a. Removal
- b. Inspection
- c. Lubrication
- d. Installation
- e. Operational Check

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Handle Lock Pin
12524346 (Fig. 6, Item 46, App C)
Spring Pin
12524618-6 (Fig. 6, Item 45, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-19 Gun fires at irregular rate

Equipment Conditions

2-64 Drive motor removed

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

Do not wear jewelry when working on gun.

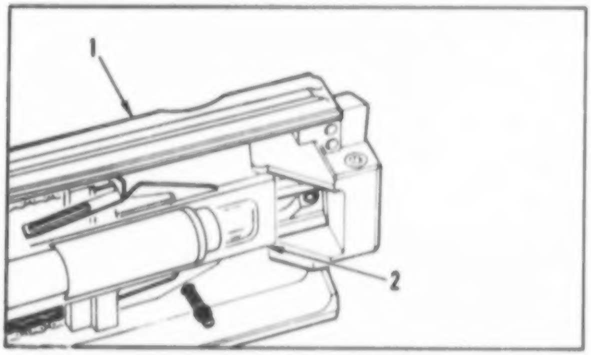
Keep your fingers away from moving parts of gun.

Wear eye protection when removing springs or using striking instruments. You can be blinded if spring or flying chips hits you in the eye. Get medical help if spring or flying chips hits you in the eye.

REMOVAL

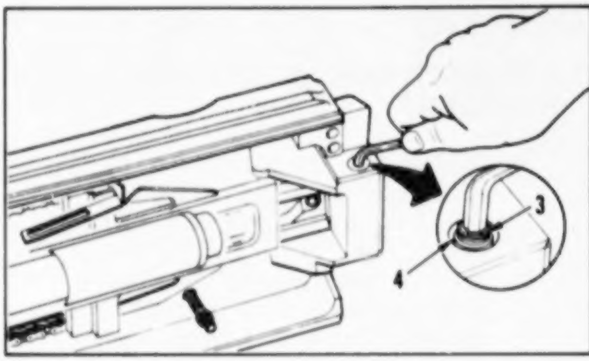
1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Turn receiver assembly (1) on side with rear track (2) positioned as shown.



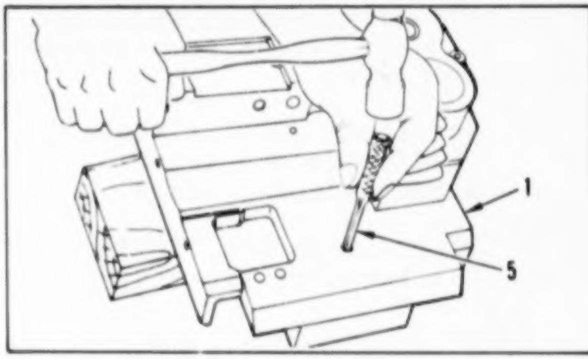
2-51. REPLACE HANDLE LOCK PIN (cont) 2-51

REMOVAL (cont)



2. **REMOVE LOCK PIN ASSEMBLY SETSCREW.**

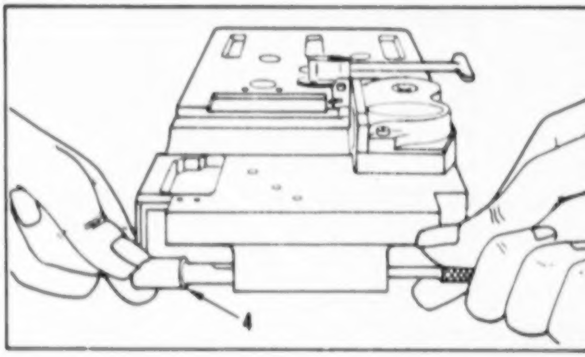
   a. Use 5-mm hex key. Remove lock pin setscrew (3) from lock pin (4).



3. **REMOVE SPRING PIN.**

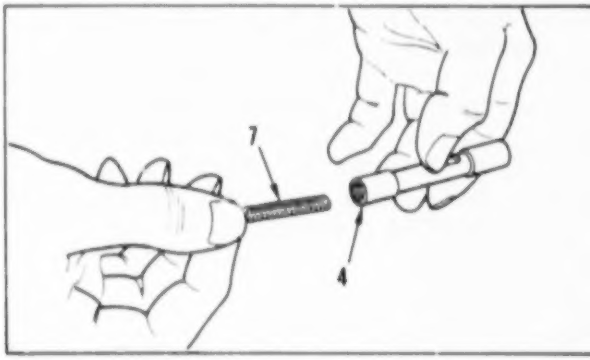
   a. Position receiver assembly (1) with motor mounting area on top. Place a flat wood block under receiver (1) as shown.

   b. Use 3/16-inch drive pin punch and ball peen hammer. Tap spring pin (5) out of receiver (1). Discard spring pin.



4. **REMOVE HANDLE LOCK PIN ASSEMBLY.**

   a. Use drive pin punch. Push handle lock pin (4) from receiver assembly.

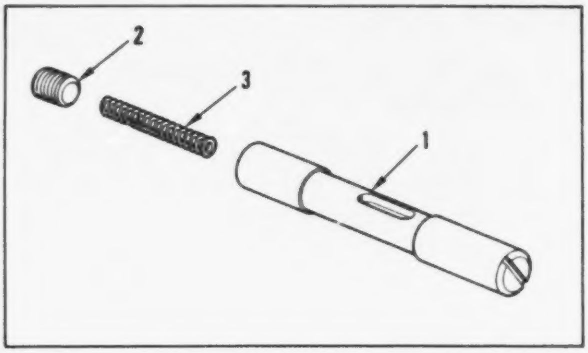


   b. Remove spring (7) from lock pin (4).

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-51. REPLACE HANDLE LOCK PIN (cont) 2-51

INSPECTION



1. **INSPECT HANDLE LOCK PIN ASSEMBLY.**

   a. Visually inspect lock pin (1) for cracks, bends, galls, or stripped threads.

   b. Get a new part if above conditions are found. Repeat steps a and b.

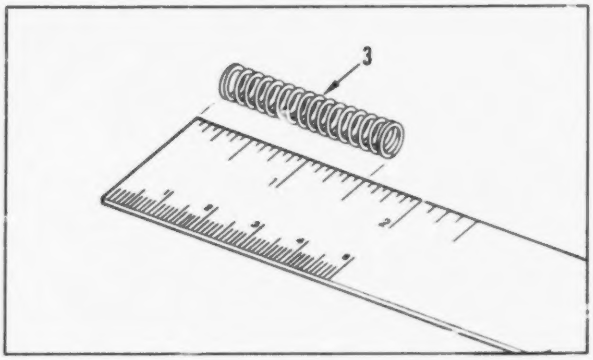
   c. Visually inspect setscrew (2) for cracks or stripped threads.

   d. Get a new part if above conditions are found. Repeat steps c and d.

   e. Visually inspect spring (3) for bends or breaks.

   f. Get a new part if above conditions are found. Repeat steps e and f.

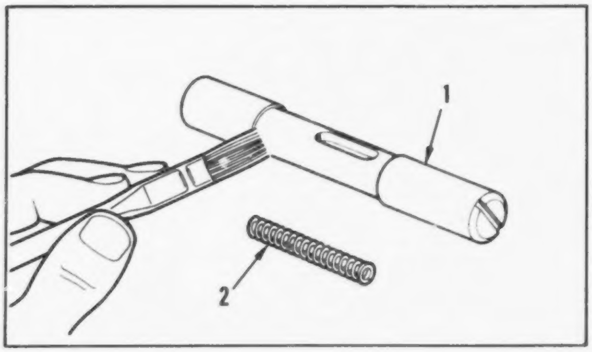
   g. Use machinist's rule. Check spring (3) for minimum length of 1-1/2 inches (38.1mm). If spring is not of proper length, get a new spring and repeat steps e, f, and g.



LUBRICATION

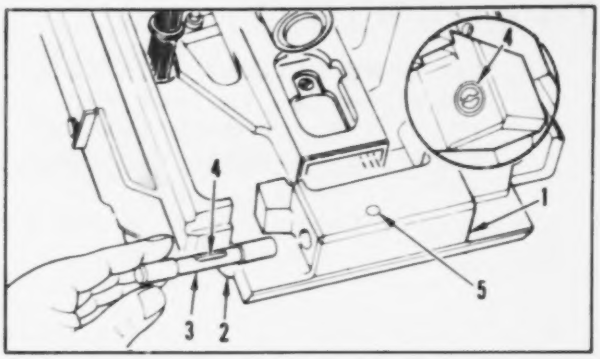
1. **LUBRICATE HANDLE LOCK PIN ASSEMBLY.**

   a. Use acid brush. Apply light coat of grease (D2) to external surfaces of lock pin (1), and to spring (2).



2-51. REPLACE HANDLE LOCK PIN (cont) 2-51

INSTALLATION

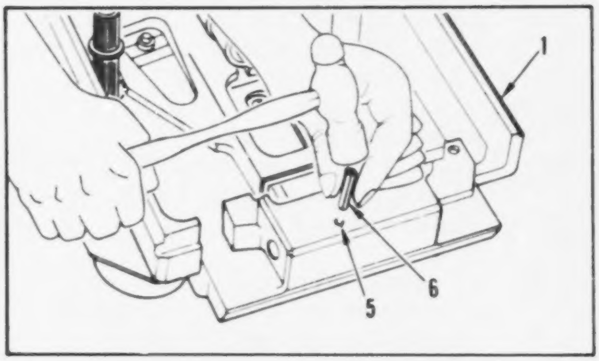


1. **INSTALL HANDLE LOCK PIN ASSEMBLY.**

   a. Position receiver assembly (1) with motor mounting area (2) on bottom as shown.

   b. Insert open-end of lock pin (3) in receiver (1) from left. Aline slot (4) in lock pin (3) with pin hole (5) on top of receiver.

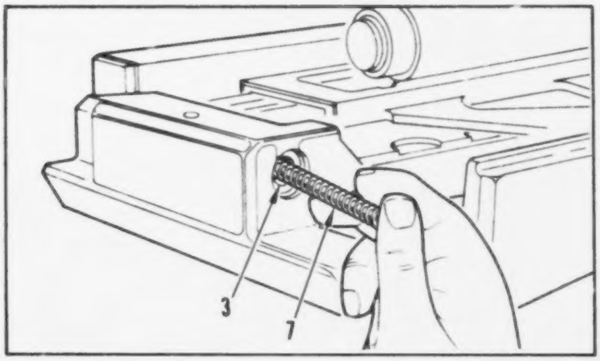
   c. Push lock pin (3) into receiver (1) until lock (3) is flush on both ends.



2. **INSTALL SPRING PIN.**

   a. Insert beveled end of new spring pin (6) in hole (5) on top of receiver assembly (1).

   b. Use ball peen hammer. Tap spring pin (6) into hole (5) until flush with top of receiver (1).



3. **INSTALL SPRING AND SETSCREW.**

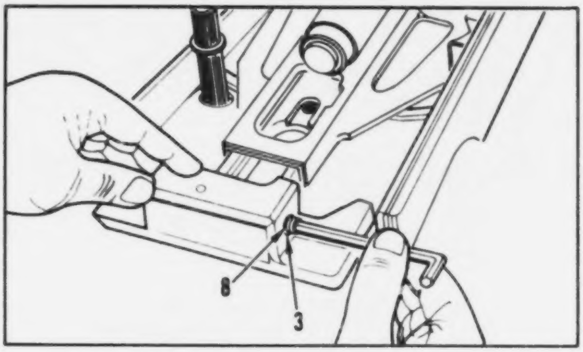
   a. Insert spring (7) in lock pin (3) as shown.

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-51. REPLACE HANDLE LOCK PIN (cont) 2-51

INSTALLATION (cont)

b. Use 5-mm hex key. Install setscrew (8) in lock pin (3). Tighten setscrew as tight as possible with hex key.



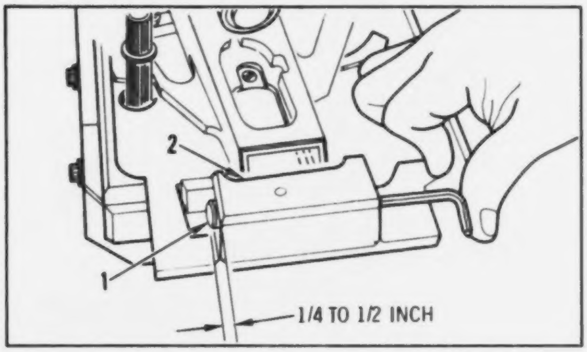
OPERATIONAL CHECK

1. **CHECK OPERATION OF HANDLE LOCK PIN.**

   a. Use hex key. Push lock pin (1) to left. Lock pin should slide freely, and should extend out of left side of receiver assembly (2) from 1/4 to 1/2 inch.

   b. Release lock pin (1). Lock pin should spring back flush with right side of receiver (2).

   c. If lock pin (1) does not function properly, repeat REMOVAL, INSPECTION, LUBRICATION, INSTALLATION, and OPERATIONAL CHECK procedures.



NOTE

FOLLOW-ON MAINTENANCE:
Install drive motor
(para 2-64, INSTALLATION).

2-52. REPLACE REAR TRACK 2-52

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Rear Track
12524470 (Fig. 6, Item 44, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-12 Gun will not fire
2-19 Gun fires at irregular rate

Equipment Conditions

2-58 Bolt and track assembly removed

General Safety Instructions

☠ **WARNING**

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

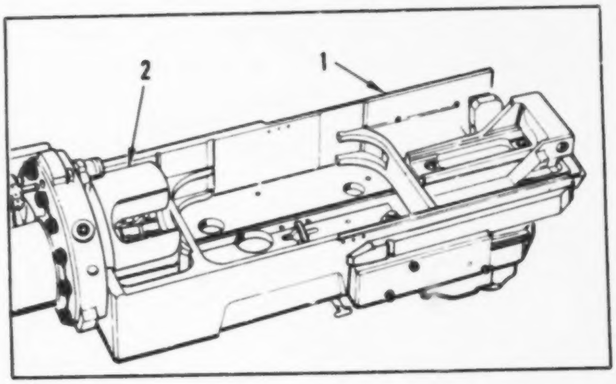
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver assembly (1) with breech (2) on top as shown.



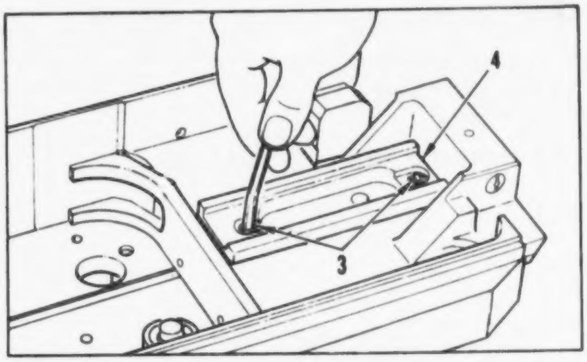
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-52. REPLACE REAR TRACK (cont) 2-52

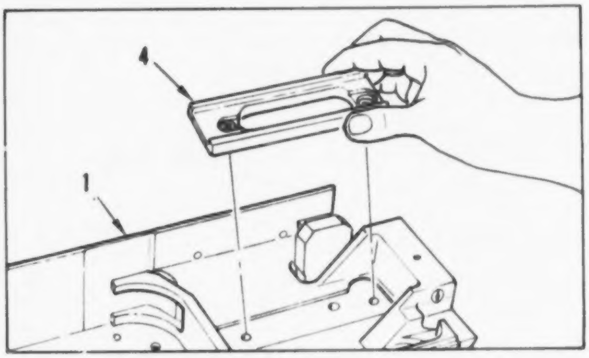
REMOVAL (cont)

2. **REMOVE REAR TRACK.**

   a. Use 5-mm hex key. Remove two socket head cap screws (3) from rear track (4).

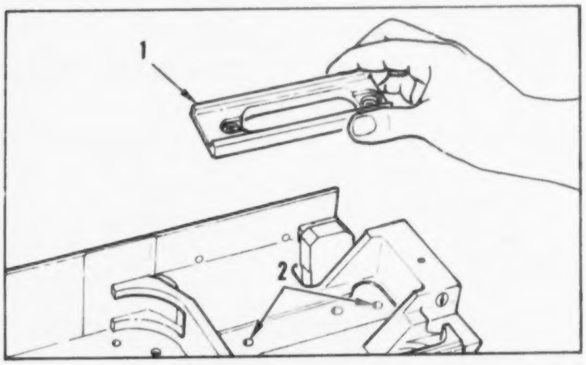


   b. Lift rear track (4) from receiver assembly (1).



INSPECTION

1. **INSPECT REAR TRACK.**



   a. Visually inspect rear track (1) for cracks, breaks, or bends.

   b. Get a new rear track if above conditions are found. Repeat steps a and b.

   c. Inspect screw thread inserts (2) for looseness and damage.

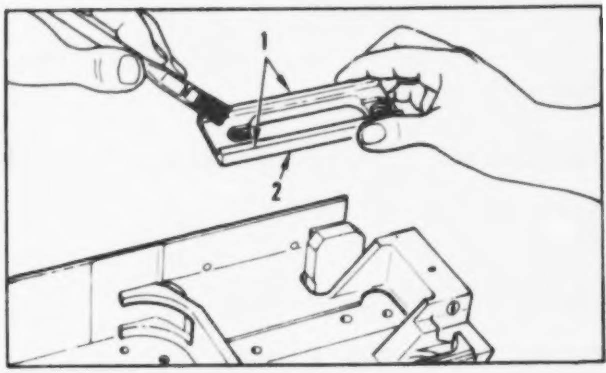
   d. If inserts (2) are loose or damaged, notify Direct Support Maintenance.

2-52. REPLACE REAR TRACK (cont) 2-52

LUBRICATION

1. **LUBRICATE REAR TRACK.**

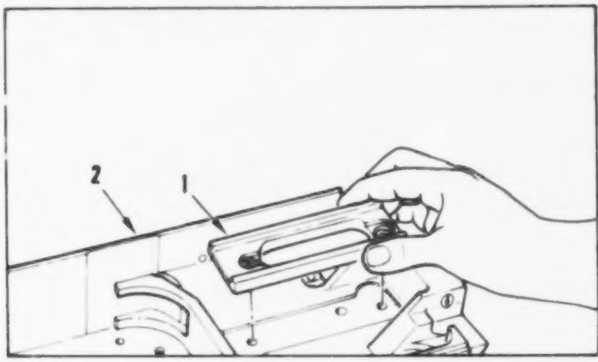
   a. Use acid brush. Apply light coat of grease (D2) to rails (1) of rear track (2).



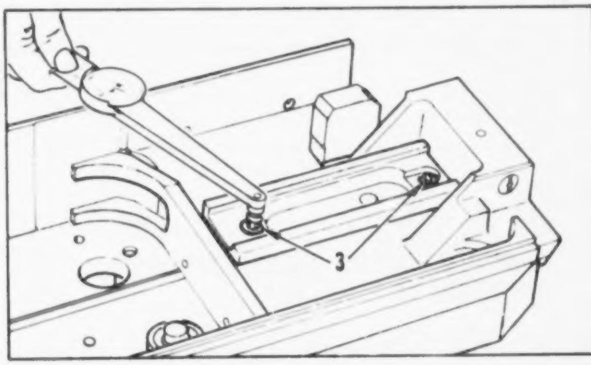
INSTALLATION

1. **INSTALL REAR TRACK.**

   a. Place rear track (1) in receiver (2) and aline socket head cap screw holes as shown.



   b. Use torque wrench and 5-mm socket wrench attachment. Install two socket head cap screws (3) and torque to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).



2. **INSTALL BOLT AND TRACK ASSEMBLY** (para 2-58).

NOTE

FOLLOW-ON MAINTENANCE: Perform receiver manual cycle check (para 2-10).

2-53. REPLACE CHAIN SEAR COVER ASSEMBLY 2-53

This task covers: a. Removal c. Installation
b. Inspection

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Sear Cover Assembly
12524086 (Fig. 6, Item 30, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-13 Gun will not stop in sear position

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

Do not wear jewelry when working on gun.

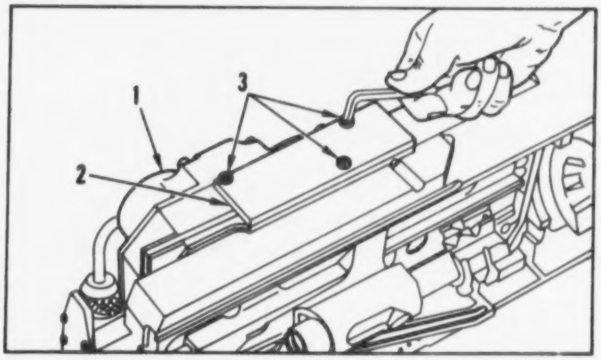
Keep your fingers away from moving parts of gun.

REMOVAL

1. **REMOVE CHAIN SEAR COVER ASSEMBLY.**

   a. Position receiver (1) with chain sear cover (2) on top as shown.

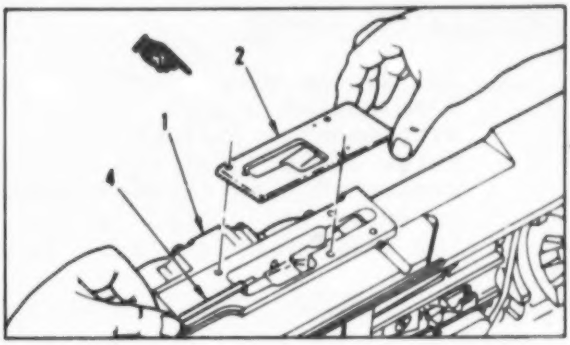
   b. Use 5-mm hex key. Remove three socket head cap screws (3).



2-53. REPLACE CHAIN SEAR COVER ASSEMBLY (cont) 2-53

REMOVAL (cont)

c. Hold sear retractor (4) in position. Lift chain sear cover assembly (2) from receiver (1). Release retractor (4) slowly to relieve spring tension.



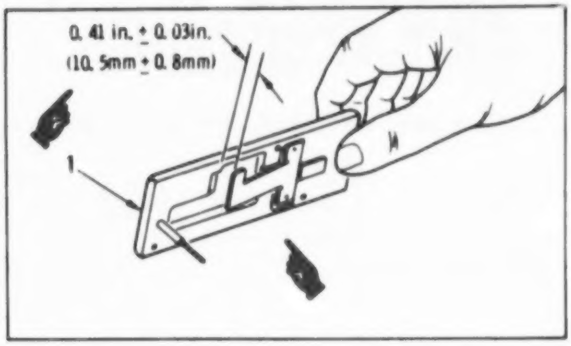
INSPECTION

1. **INSPECT CHAIN SEAR COVER ASSEMBLY.**

   a. Visually inspect both sides of chain sear cover assembly (1) for cracks, breaks, and bends.

   b. Check chain sear cover assembly for improper spring height. Height from tip of flat spring to cover should be 0.41 in. ±0.03 in. (10.5mm ±0.8mm).

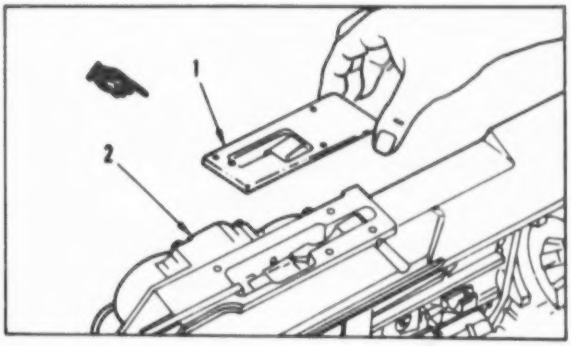
   c. Get a new chain sear cover assembly if above conditions are found. Repeat steps a, b, and c.



INSPECTION

1. **INSTALL CHAIN SEAR COVER ASSEMBLY.**

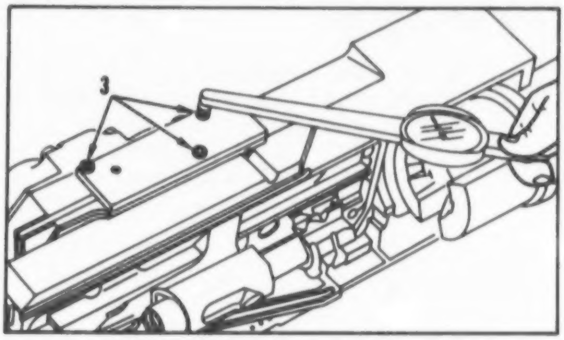
   a. Position chain sear cover assembly (1) on receiver (2) with holes alined as shown.



2-53. REPLACE CHAIN SEAR COVER ASSEMBLY (cont) 2-53

INSTALLATION (cont)

b. Use torque wrench and 5-mm socket wrench attachment. Install three socket head cap screws (3) and torque to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).



NOTE

FOLLOW-ON MAINTENANCE: Perform receiver manual cycle check (para 2-10).

2-54. REPLACE CHAIN SEAR CATCH ASSEMBLY 2-54

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Chain Sear Catch Assembly
12524070 (Fig. 5, Item 28, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-12 Gun will not fire

Equipment Conditions

2-53 Chain sear cover assembly removed (Initial Setup and REMOVAL)

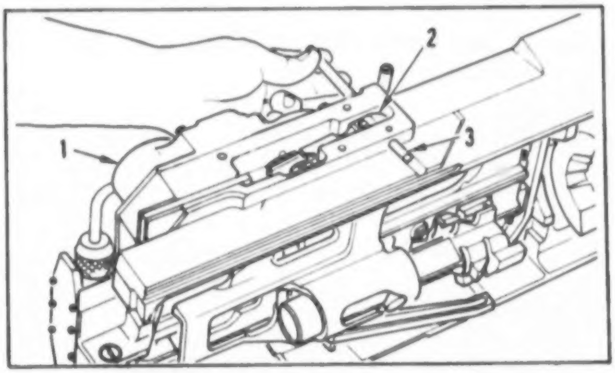
General Safety Instructions

WARNING

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL



1. **POSITION RECEIVER.**

   a. Position receiver assembly (1) with chain sear catch assembly (2) on top as shown.

2. **REMOVE CHAIN SEAR CATCH ASSEMBLY.**

   NOTE

   Chain sear catch assembly dowel pin can be removed only one way.

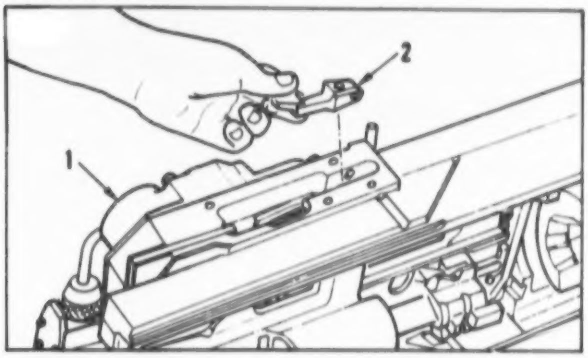
   a. Use 3/32-inch drive pin punch. Push dowel pin (3) out of receiver (1) as shown.

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-54. REPLACE CHAIN SEAR CATCH ASSEMBLY (cont) 2-54

REMOVAL (cont)

b. Lift chain sear catch (2) out of receiver assembly (1).

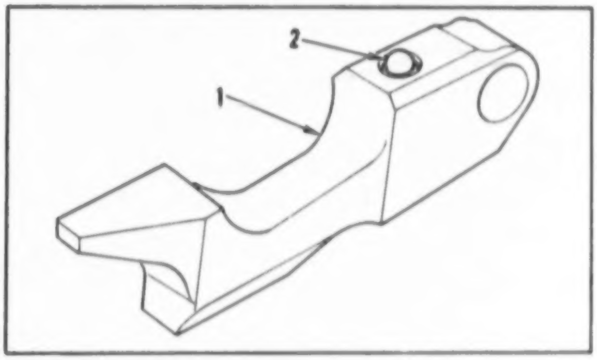


INSPECTION

1. **INSPECT CHAIN SEAR CATCH.**

   a. Visually inspect chain sear catch assembly (1) for cracks, bends, and breaks, missing or loose plunger button (2).

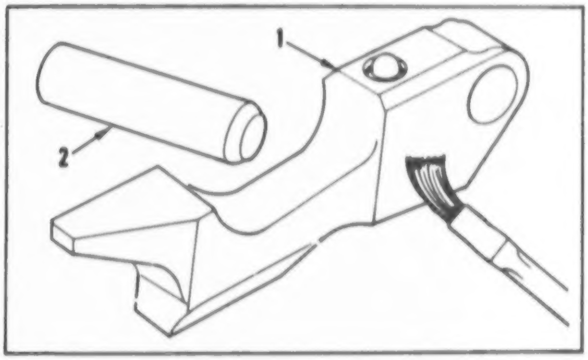
   b. Get a new chain sear catch if above conditions are found. Repeat steps a and b.



LUBRICATION

1. **LUBRICATE CHAIN SEAR CATCH ASSEMBLY.**

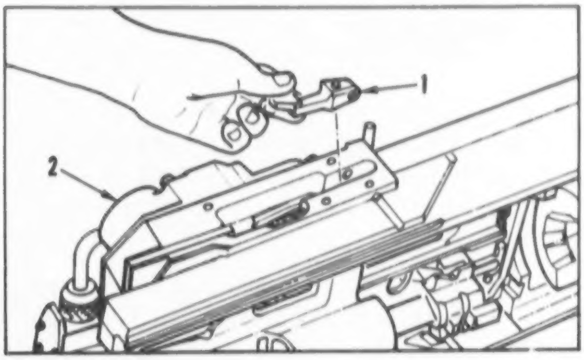
   a. Use acid brush. Apply light coat of grease (D2) to outside surface of chain sear catch (1) and dowel pin (2).



INSTALLATION

1. **INSTALL CHAIN SEAR CATCH ASSEMBLY.**

   a. Place chain sear catch assembly (1) into receiver (2). Aline dowel pin holes.



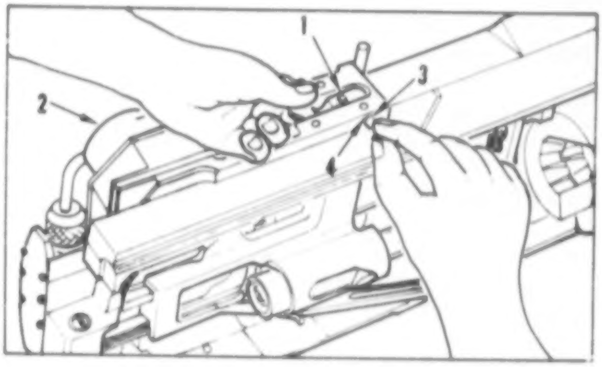
2-54. REPLACE CHAIN SEAR CATCH ASSEMBLY (cont) 2-54

INSTALLATION (cont)

NOTE

Dowel pin can be installed only one way as shown.

b. Install dowel pin (3) into hole (4) in receiver (2) and through chain sear catch (1).



NOTE

FOLLOW-ON MAINTENANCE: Install chain sear cover assembly (para 2-53, Initial Setup, INSTALLATION, and follow-on maintenance).

2-55. REPLACE PIVOT LATCH 2-55

This task covers: a. Removal c. Installation
b. Inspection

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Latch Bracket
12524306 (Fig. 6, Item 49, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-12 Gun will not fire

Equipment Conditions

2-50 Latch-track hook removed (Initial Setup and REMOVAL)

General Safety Instructions

☠ **WARNING**

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

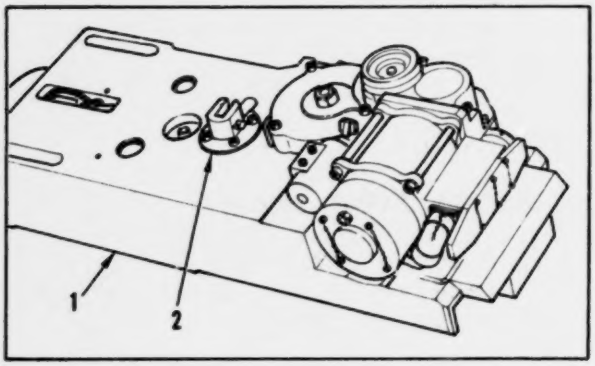
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver (1) with pivot latch (2) up as shown.

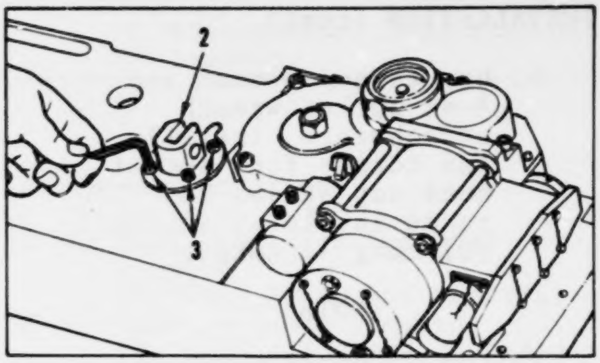


2-55. REPLACE PIVOT LATCH (cont) 2-55

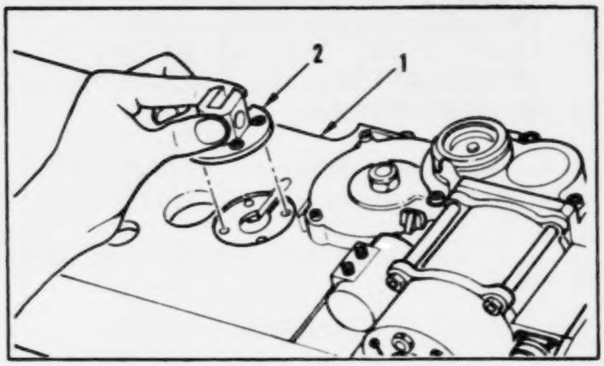
REMOVAL (cont)

2. **REMOVE PIVOT LATCH.**

   a. Use 5-mm hex key. Remove four socket head cap screws (3) from pivot latch (2).



   b. Lift pivot latch (2) from receiver (1).

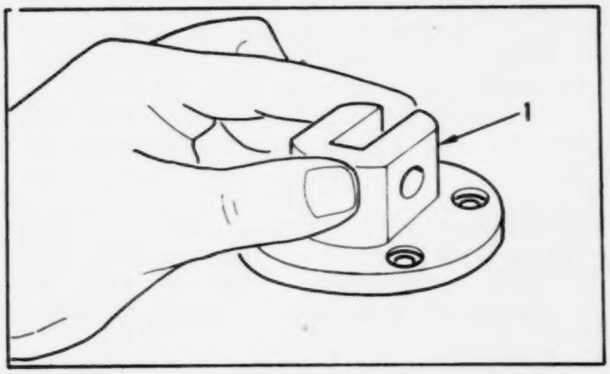


INSPECTION

1. **INSPECT PIVOT LATCH.**

   a. Visually inspect pivot latch (1) for cracks or breaks.

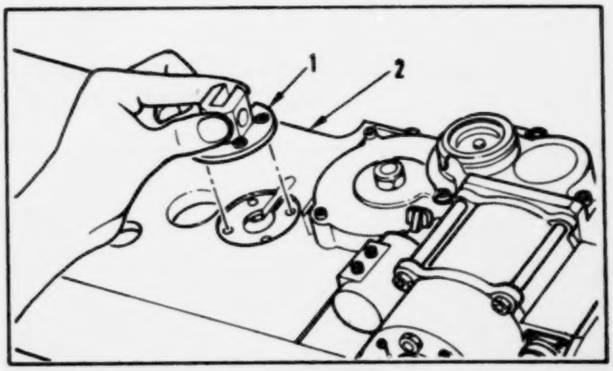
   b. Get a new pivot latch if above conditions are found. Repeat steps a and b.



INSTALLATION

1. **INSTALL PIVOT LATCH.**

   a. Place pivot latch (1) on receiver (2). Aline attach holes as shown.



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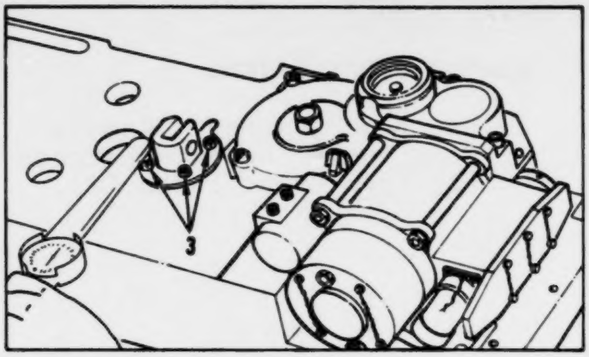
2-55. REPLACE PIVOT LATCH (cont) 2-55

INSTALLATION (cont)

b. Use torque wrench and 5-mm socket wrench attachment. Install and torque four socket head cap screws (3) to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).



NOTE

FOLLOW-ON MAINTENANCE: Install latch-track hook (para 2-50, Initial Setup, INSTALLATION, and follow-on maintenance).

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK 2-56

This task covers:
a. Disassembly
b. Inspection
c. Lubrication
d. Assembly

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

0.032-Inch Lock Wire (D1)
Grease (D2)
Adhesive, Type I (D23)
Cotter Pin
MS24665-132 (Fig. 6, Item 11, App C)
Spring Pin
12524618-1 (Fig. 6, Item 33, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-11	Gun fires at reduced rate
2-12	Gun will not fire
2-17	Gun fires intermittently
2-20	Gun fires without hangfire protection

Equipment Conditions

2-58	Bolt and track assembly removed (Initial Setup and REMOVAL)
2-63	Sear assembly removed (Initial Setup and REMOVAL)
2-54	Chain sear catch assembly removed (Initial Setup and REMOVAL)
2-64	Motor removed (Initial Setup and REMOVAL steps 1 thru 4c)
2-48	Breech assembly removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

Wear eye protection when cutting lock wire or using striking instruments. You can be blinded if wire or flying chips hit you in the eye. Get medical help at once if wire or flying chips get in your eye.

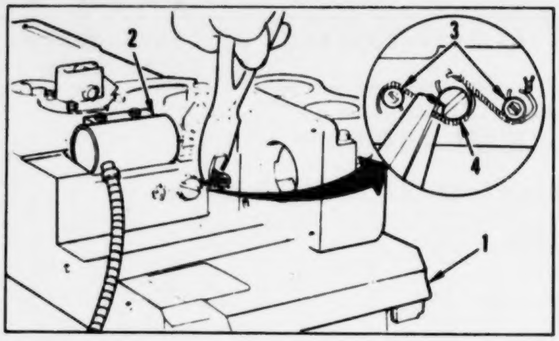
Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

DISASSEMBLY



1. **REMOVE LOCK WIRE FROM REAR CHAIN GUIDE SOCKET HEAD CAP SCREWS AND CHAIN SEAR LINKAGE PIN.**

   a. Place receiver assembly (1) with sear solenoid (2) on top as shown.

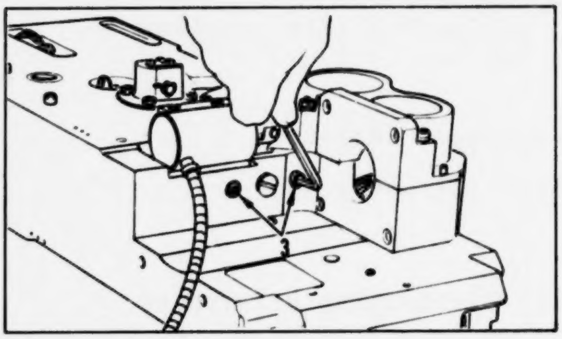
   b. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from two socket head cap screws (3) and sear linkage pin (4).

2. **REMOVE REAR CHAIN GUIDE.**

NOTE

The rear chain guide and some mechanical interlock parts may fall below receiver assembly when screws are removed in next step.

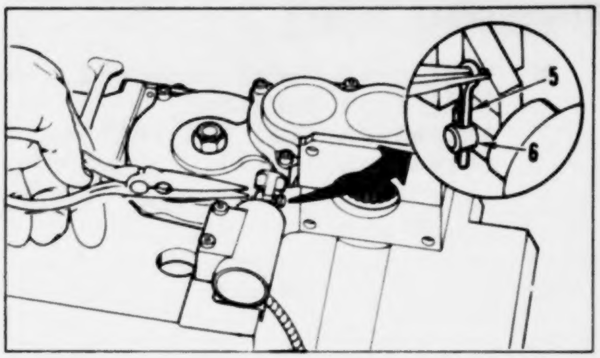
   a. Use 5-mm hex key. Remove two socket head cap screws (3).



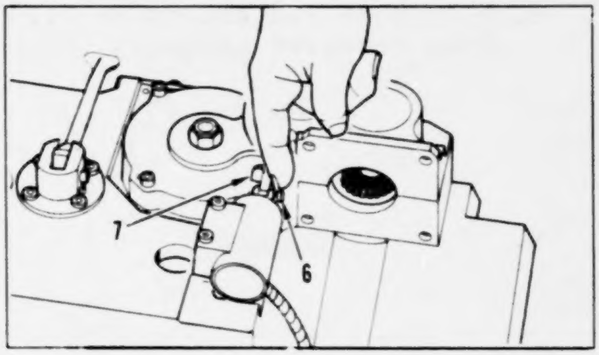
2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

DISASSEMBLY (cont)

b. Use round-nose pliers. Remove cotter pin (5) from sear release pin (6). Discard cotter pin.

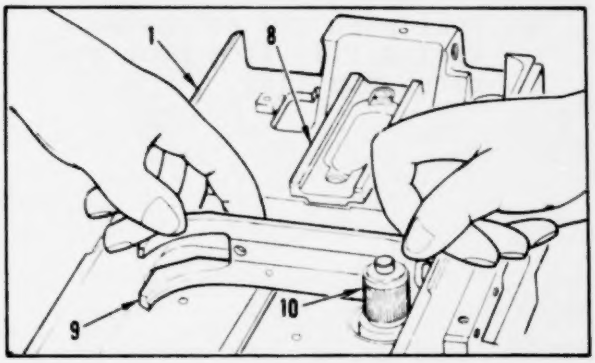


c. Remove sear release pin (6) from sear release link (7).



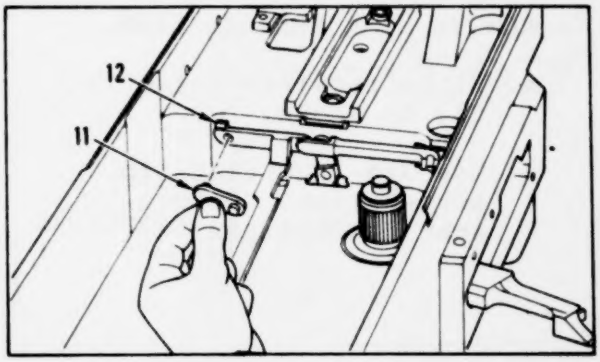
d. Place receiver assembly (1) with rear track (8) on top as shown.

e. Slide rear chain guide (9) about 1/4-inch toward drive gear (10). Lift chain guide straight up out of receiver (1).



3. **REMOVE PUSH ROD EXTENSION AND SPRING.**

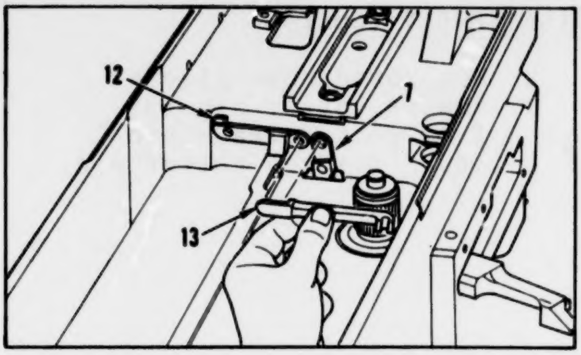
a. Pull crank (11) from push rod extension (12).



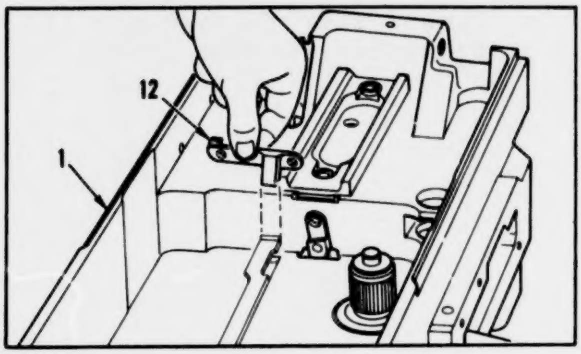
2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

DISASSEMBLY (cont)

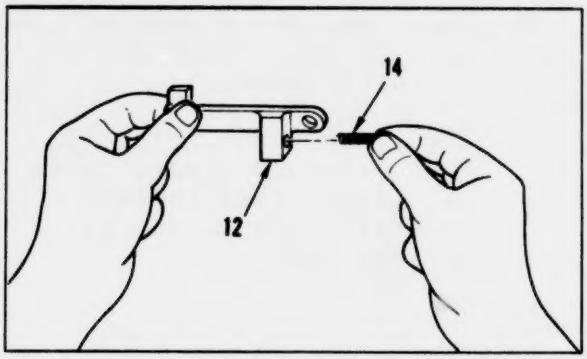
b. Pull chain sear push rod (13) from push rod extension (12) and sear release link (7).



c. Lift push rod extension (12) from receiver assembly (1).



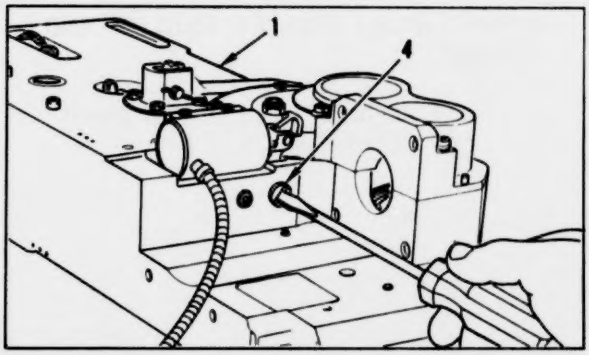
d. Pull push rod extension spring (14) from push rod extension (12).



4. **REMOVE SEAR RELEASE LINK.**

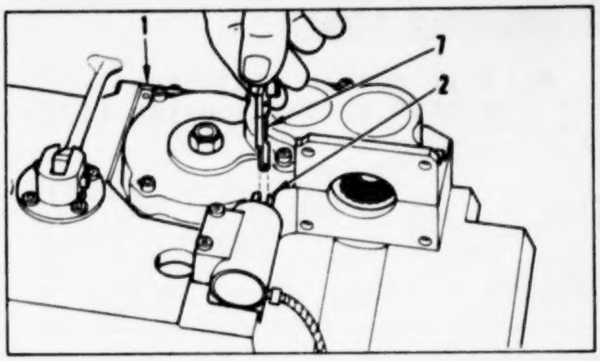
a. Place receiver assembly (1) as shown.

b. Use 3/8-inch flat-tip screwdriver. Remove sear linkage pin (4).



DISASSEMBLY (cont)

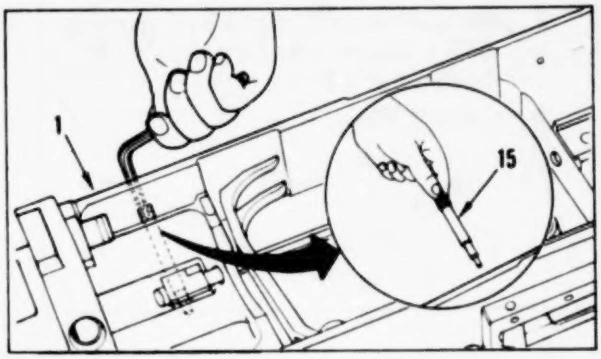
c. Lift sear release link (7) from receiver (1) and sear solenoid plunger clevis (2).



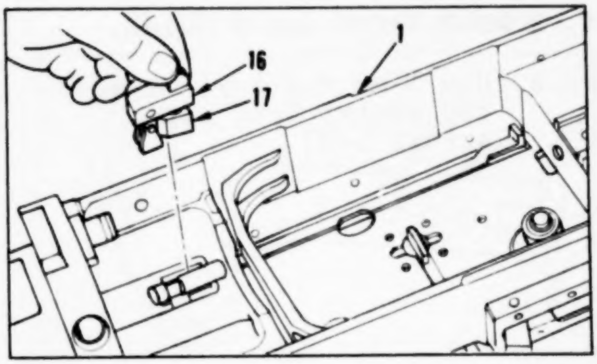
5. **REMOVE MECHANICAL INTERLOCK ROCKER, ROCKER SPRING HOUSING, AND SPRING.**

a. Place receiver assembly (1) as shown.

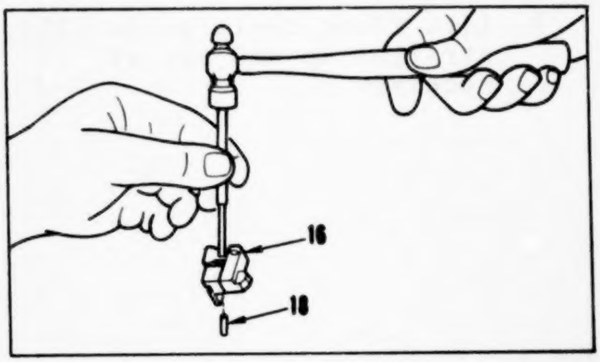
b. Use 6-mm hex key. Remove rocker support rod (15).



c. Lift rocker (16) and rocker spring housing (17) from receiver assembly (1).



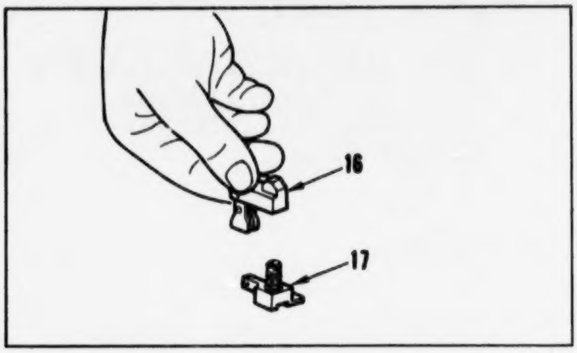
d. Use hammer and 3/32-inch drive pin punch. Remove spring pin (18) from rocker (16). Discard spring pin.



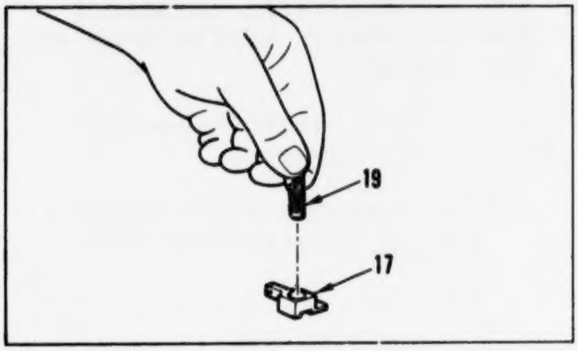
2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

DISASSEMBLY (cont)

e. Pull rocker (16) from rocker spring housing (17).

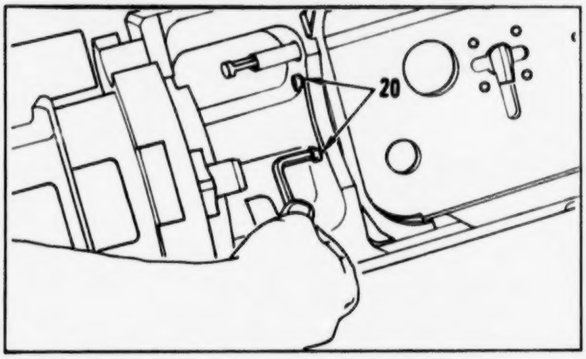


f. Pull recoil rocker spring (19) from rocker spring housing (17).

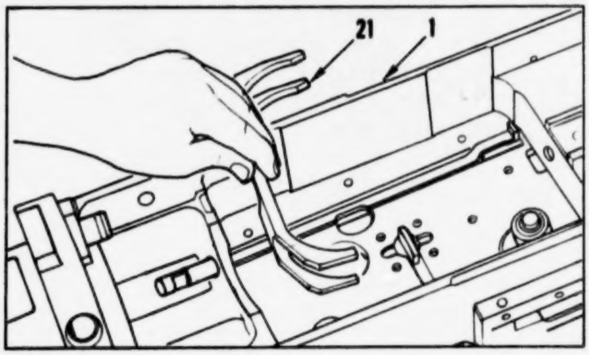


6. **REMOVE FRONT CHAIN GUIDE.**

a. Use 5-mm hex key. Remove two socket head cap screws (20).



b. Lift front chain guide (21) straight up and out of receiver (1).

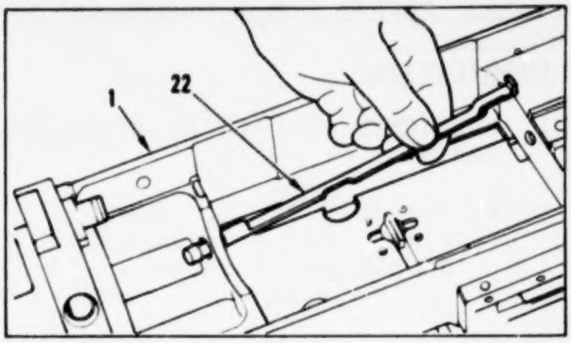


2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

DISASSEMBLY (cont)

7. REMOVE ACTUATOR ROD ASSEMBLY.

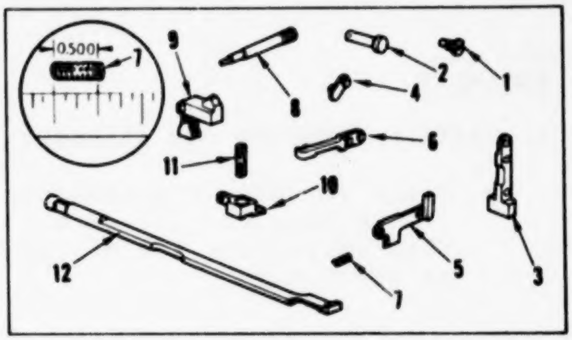
a. Lift actuator rod assembly (22) up and slide over to slot and remove from receiver (1).



INSPECTION

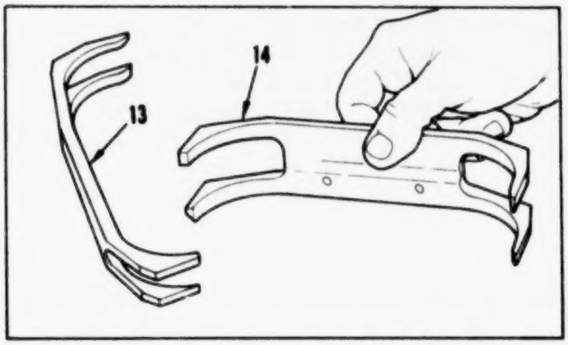
1. INSPECT CHAIN GUIDES AND MECHANICAL INTERLOCK PARTS.

a. Visually inspect sear linkage pin (1), sear release pin (2), sear release link (3), crank (4), push rod extension (5), sear push rod (6), push rod extension spring (7), rocker support rod (8), rocker (9), rocker spring housing (10), recoil rocker spring (11), and actuator rod assembly (12) for bends, cracks, chips, breaks, or obvious wear.



b. Check push rod extension spring (7) for improper free length. Spring free length should be 0.50 in. ±0.05 in. (2.7mm ±1.3mm).

c. Get a new part if above conditions are found. Repeat steps a, b, and c.



d. Visually inspect chain guides (13, 14) for cracks or bends.

NOTE

Both front and rear chain guides are the same. Either chain guide can be installed in the front or rear position.

e. Get a new chain guide if above conditions are found. Repeat steps d and e.

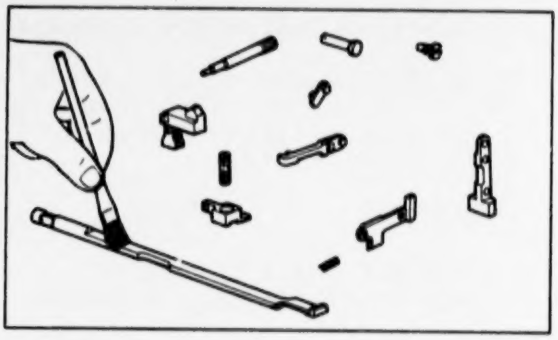
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

LUBRICATION

1. **LUBRICATE MECHANICAL INTERLOCK PARTS.**

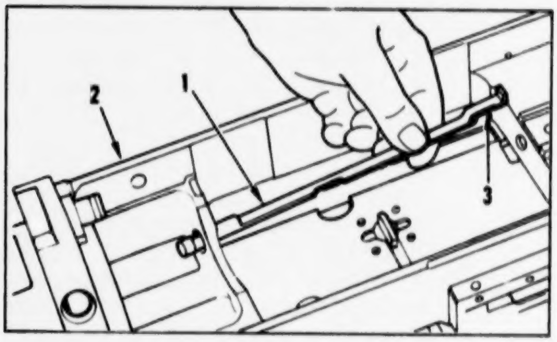
   a. Use acid brush. Apply light coat of grease (D2) on all parts shown.



ASSEMBLY

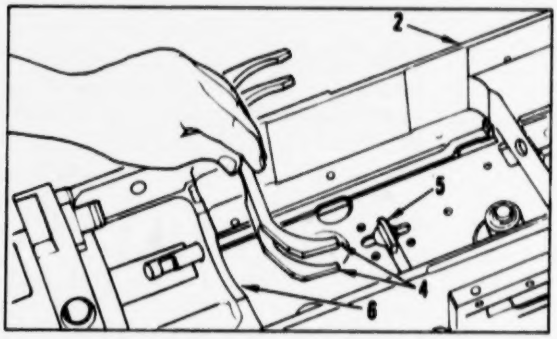
1. **INSTALL ACTUATOR ROD ASSEMBLY.**

   a. Place actuator rod assembly (1) in receiver (2) with step-up portion (3) on top as shown.



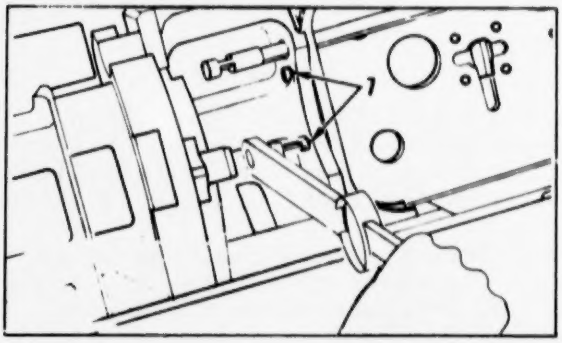
2. **INSTALL FRONT CHAIN GUIDE.**

   a. Position short forks of chain guide (4) to right of latch-track hook (5). Lower chain guide (4) straight down against front wall (6) of receiver (2) until guide is all the way down.



   b. Apply one drop of adhesive (D23) to threads of two socket head cap screws (7).

   c. Use torque wrench and 5-mm socket wrench attachment. Install and torque two socket head cap screws (7) to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).

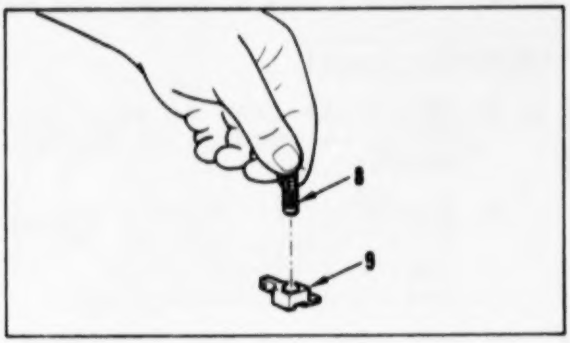


2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

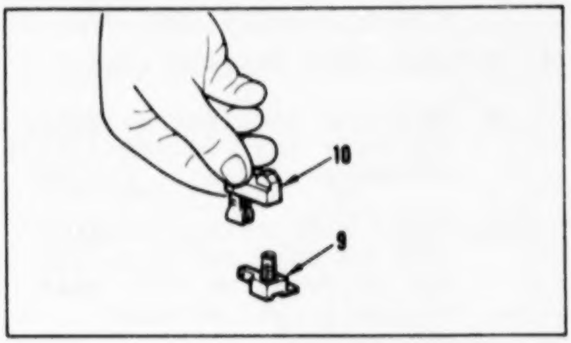
ASSEMBLY (cont)

3. **INSTALL MECHANICAL INTERLOCK ROCKER, ROCKER SPRING HOUSING, AND SPRING.**

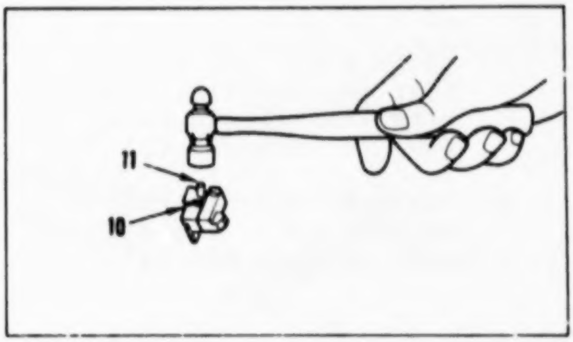
   a. Place rocker spring (8) in rocker spring housing (9).



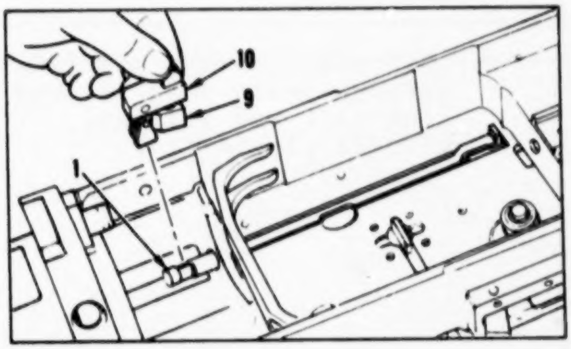
   b. Install rocker (10) on rocker spring housing (9) and aline pin holes.



   c. Use hammer. Install new spring pin (11) in rocker (10).



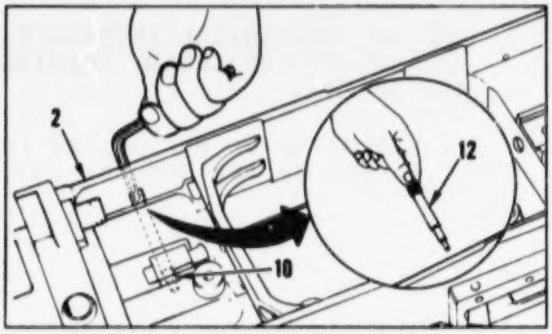
   d. Place rocker (10) and rocker spring housing (9) on actuator rod assembly (1).



MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

ASSEMBLY (cont)

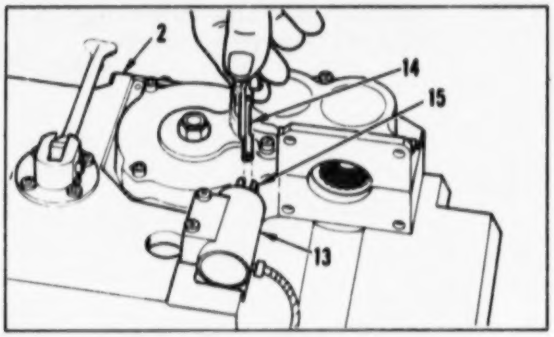


e. Apply one drop of adhesive (D23) to threads of rocker support rod (12).

f. Place rocker support rod (12) through side of receiver assembly (2) and through rocker (10).

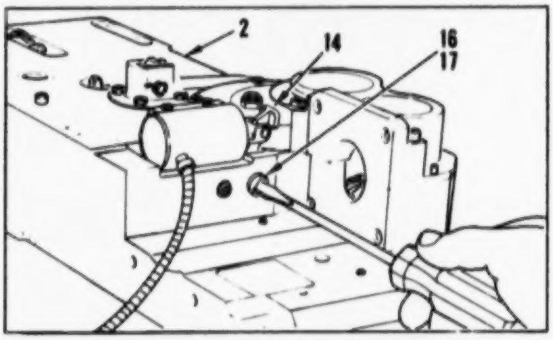
g. Use 6-mm hex key. Tighten rocker support rod (12).

4. **INSTALL SEAR RELEASE LINK.**



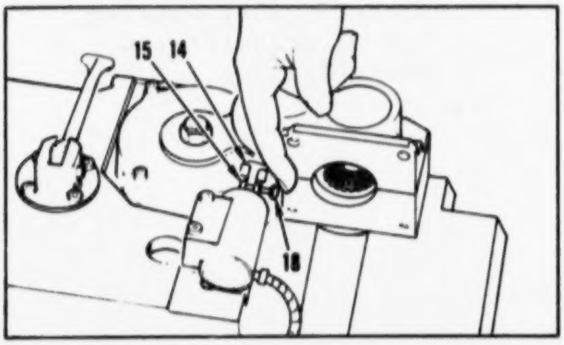
a. Position receiver assembly (2) with sear solenoid (13) on top as shown.

b. Lower sear release link (14) through receiver (2) and in position with sear solenoid (13) plunger clevis (15).



c. Aline pivot pin hole in sear release link (14) with linkage pin hole (16) in receiver (2).

d. Use 3/8-inch flat-tip screwdriver. Install sear linkage pin (17).



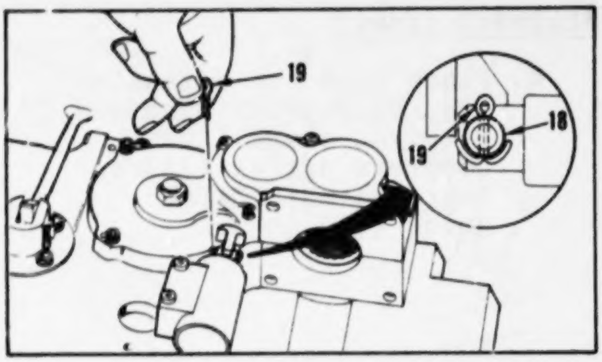
e. Push sear release pin (18) through chain sear release link (14) and solenoid plunger clevis (15).

2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

ASSEMBLY (cont)

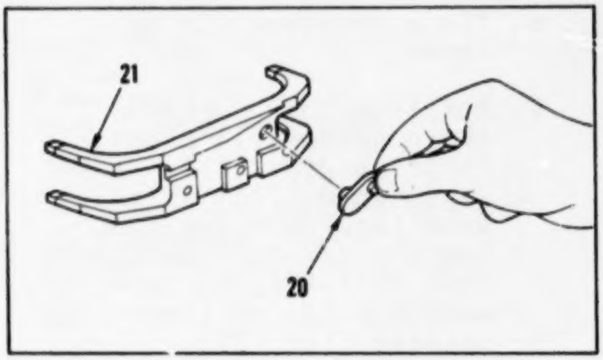
f. Use round-nose pliers. Install new cotter pin (19) in sear release pin (18).

g. Bend each end of cotter pin (19) around sides of sear release pin (18) as shown.

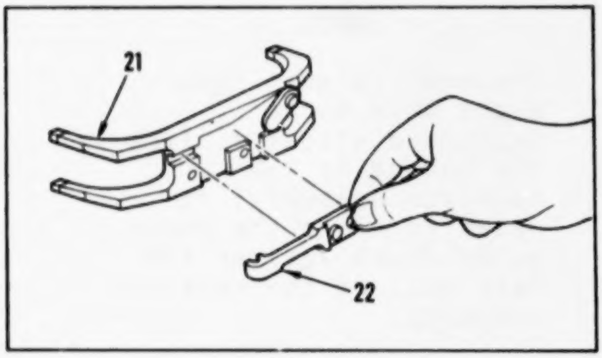


5. INSTALL REAR CHAIN GUIDE.

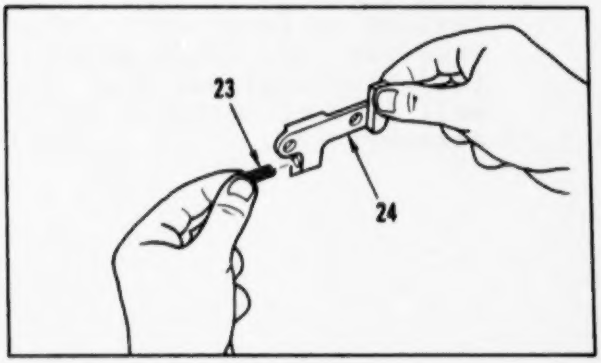
a. Place crank (20) on rear chain guide (21).



b. Place sear push rod (22) on rear chain guide (21), with pegs facing out.



c. Install push rod extension spring (23) into push rod extension (24).

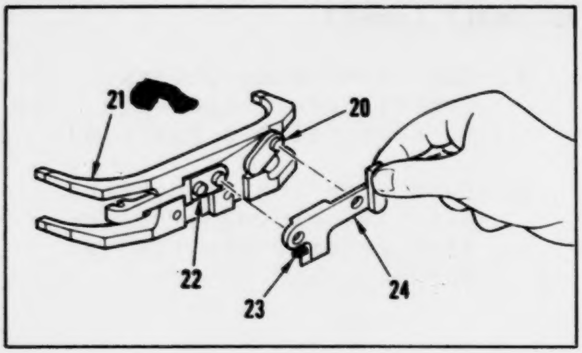


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

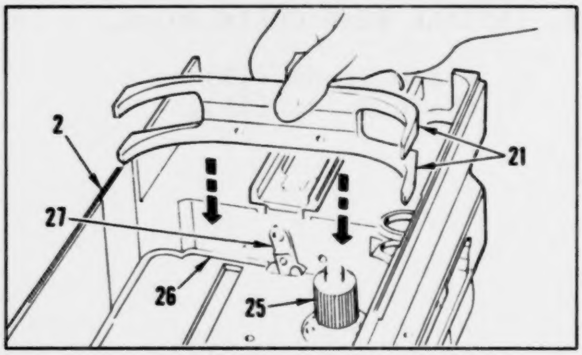
ASSEMBLY (cont)

d. Place push rod extension (24) on pegs of push rod (22) and crank (20). Compress spring (23) to bear against chain guide (21).



e. Place receiver (2) as shown.

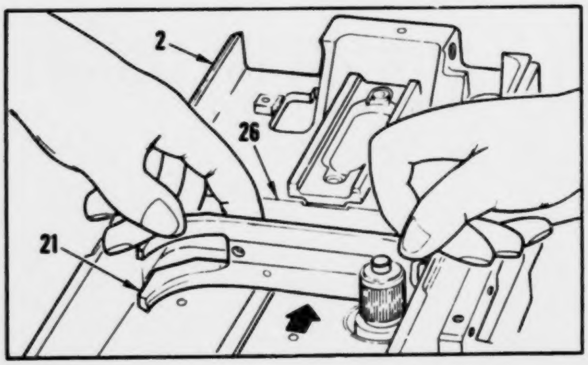
f. Position long forks of chain guide (21) closest to drive gear (25). Lower chain guide (21) straight down into receiver (2), keeping 1/4-inch away from rear wall (26) of receiver assembly (2) to clear sear release link (27).



NOTE

The sear release link might have to be depressed slightly, from the bottom of the receiver assembly, in order to slide the chain guide flush against the rear wall of the receiver assembly.

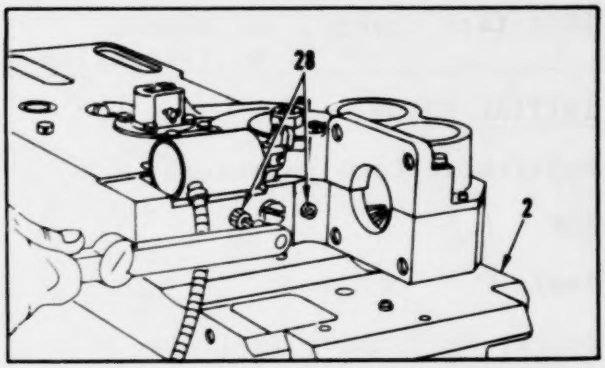
g. With chain guide (21) resting on floor of receiver (2), slide guide (21) flush against rear wall (26) of receiver assembly (2).



2-56. REPAIR CHAIN GUIDES AND MECHANICAL INTERLOCK (cont) 2-56

ASSEMBLY (cont)

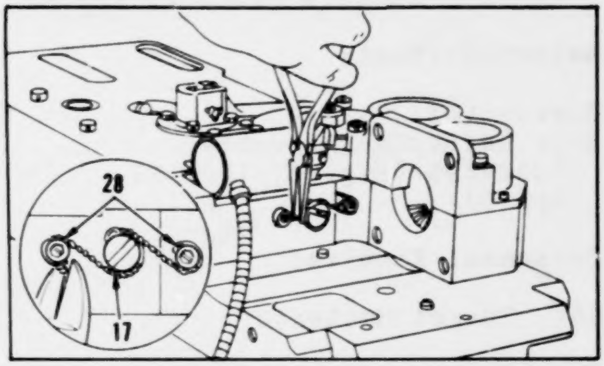
h. Turn receiver assembly (2) over as shown.



i. Use torque wrench and 5-mm socket wrench attachment. Install and torque two socket head cap screws (28) to 80 in.-lb ±5 in.-lb (92 cmkg ±6 cmkg).

6. INSTALL LOCK WIRE ON REAR CHAIN GUIDE SOCKET HEAD CAP SCREWS.

a. Use duckbill pliers and diagonal-cutting pliers. Install lock wire on two socket head cap screws (28) and sear linkage pin (17).



NOTE

FOLLOW-ON MAINTENANCE: Install chain sear catch assembly (para 2-54, Initial Setup and INSTALLATION). Install sear assembly (para 2-63, Initial Setup, INSTALLATION, and follow-on maintenance installations only). Install breech assembly (para 2-48, Initial Setup, INSTALLATION, and follow-on maintenance installations only). Install motor (para 2-64, Initial Setup, and INSTALLATION steps 1e, 1f, 2, and 3). Install bolt and track assembly (para 2-58). Perform manual cycle check (para 2-10).

2-57. REPLACE SEAR RETRACTOR ASSEMBLY 2-57

This task covers: a. Removal b. Inspection c. Lubrication d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Sear Retractor Assembly
12524295 (Fig. 6, Item 55, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-13 Gun will not stop in sear position

Equipment Conditions

2-53 Chain sear cover removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

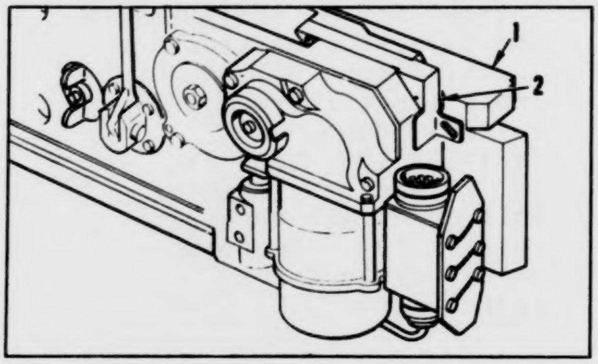
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver assembly (1) with sear retractor assembly (2) on top as shown.



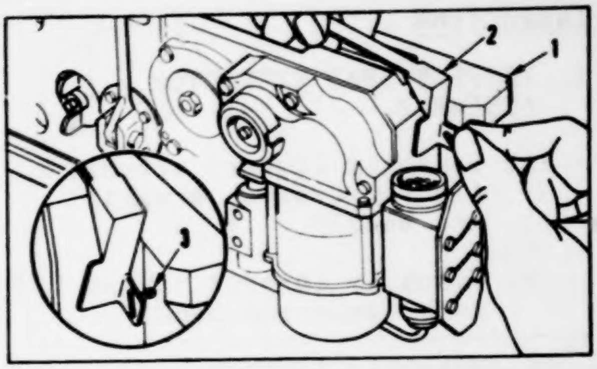
2-57. REPLACE SEAR RETRACTOR ASSEMBLY (cont) 2-57

REMOVAL (cont)

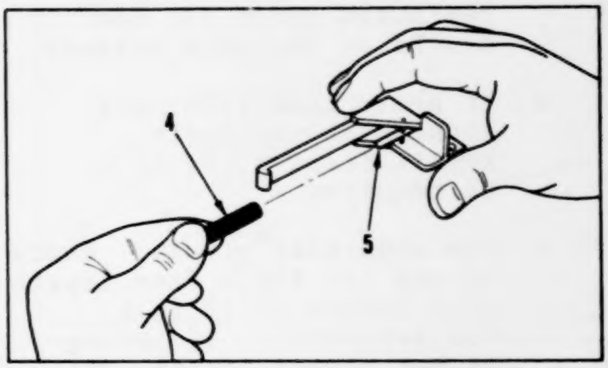
2. **REMOVE SEAR RETRACTOR ASSEMBLY.**

   a. Swing sear retractor assembly (2) away from receiver assembly (1). Pull retractor (2) from sear retractor pivot (3).

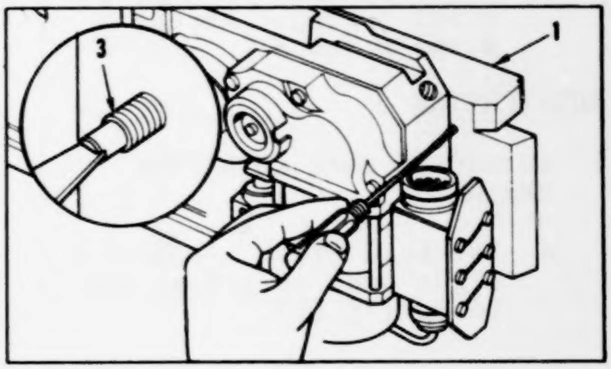
   b. Remove sear retractor assembly from receiver assembly (1).



   c. Remove spring (4) from retractor plunger (5).



   d. Use 1/8-inch flat-tip screwdriver. Remove sear retractor pivot (3) from receiver (1).



2-57. REPLACE SEAR RETRACTOR ASSEMBLY (cont) 2-57

INSPECTION

1. **INSPECT SEAR RETRACTOR ASSEMBLY.**

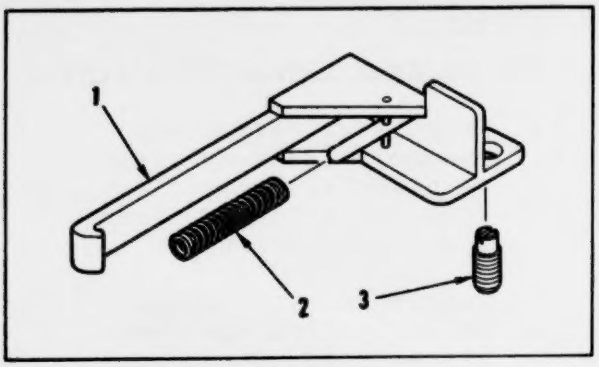
   a. Visually inspect retractor (1) for cracks, breaks, and bends.

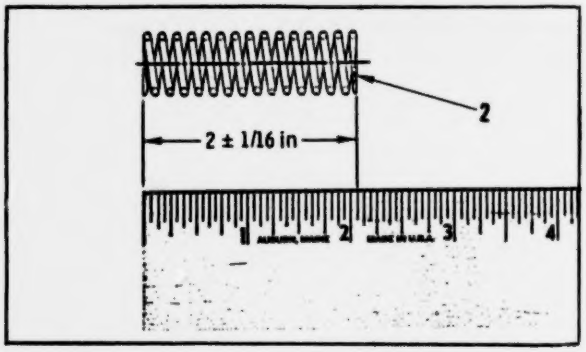
   b. Visually inspect spring (2) for breaks and bends.

   c. Visually inspect sear retractor pivot (3) for cracks or stripped threads.

   d. If above conditions are found, replace parts. Repeat steps a, b, or c as required.

   e. Use machinist's rule. Check spring (2) for a free length of 2 inches ±1/16 inch (50.8mm ±3mm). If spring is not proper length, get a new spring. Repeat steps b and e.

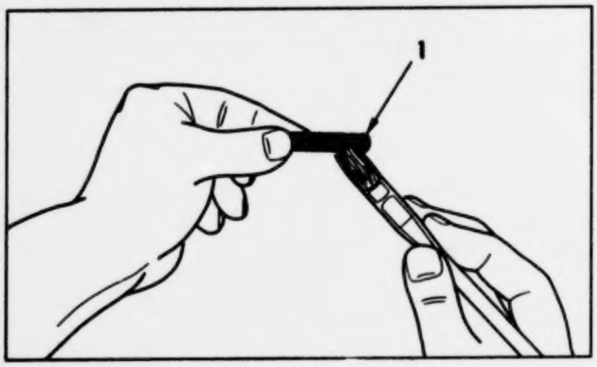




LUBRICATION

1. **LUBRICATE SEAR RETRACTOR SPRING.**

   a. Use acid brush. Apply light coat of grease (D2) to spring (1).

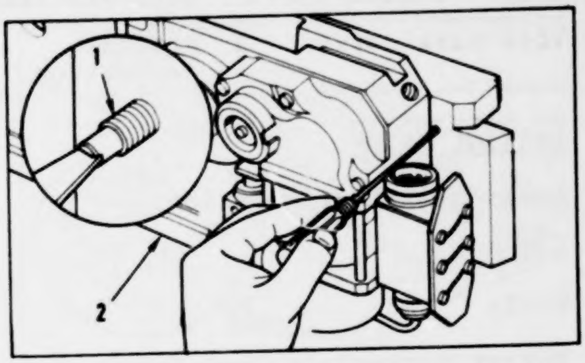


2-57. REPLACE SEAR RETRACTOR ASSEMBLY (cont) 2-57

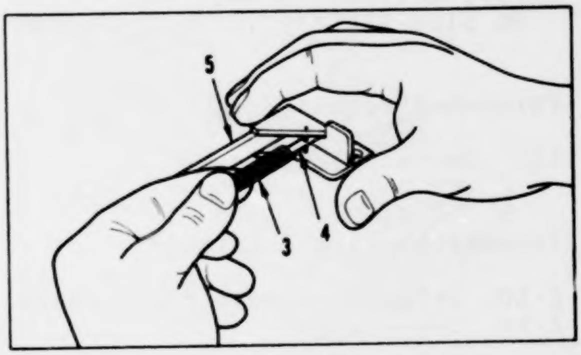
INSTALLATION

1. **INSTALL SEAR RETRACTOR ASSEMBLY.**

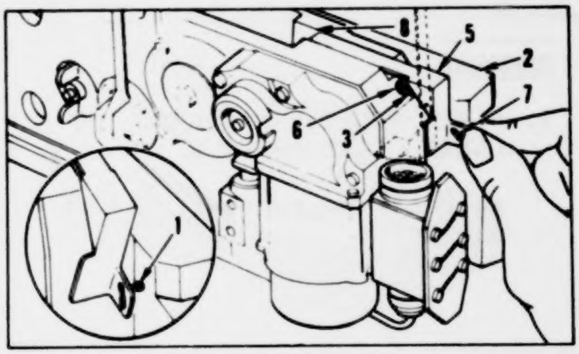
   a. Use 1/8-inch flat-tip screwdriver. Install sear retractor pivot (1) in receiver (2).



   b. Install spring (3) on plunger (4) of retractor (5).



   c. Position sear retractor assembly as shown in the "up" position. Insert spring (3) in hole (6) of receiver (2). Engage pivot hole (7) and pivot (1). Aline and place retractor (5) in receiver slot (8). Push down and forward to engage sear assembly.



NOTE

FOLLOW-ON MAINTENANCE: Install chain sear cover assembly (para 2-53, Initial Setup and INSTALLATION). Perform receiver manual cycle check (para 2-10).

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-58. REMOVE/INSTALL BOLT AND TRACK ASSEMBLY 2-58

This task covers:
- a. Removal
- b. Inspection
- c. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-10 Receiver manual cycle check
2-14 Gun stalls

Equipment Conditions

2-27 Feeder assembly removed from gun

General Safety Instructions

WARNING

Do not wear jewelry when working on gun.

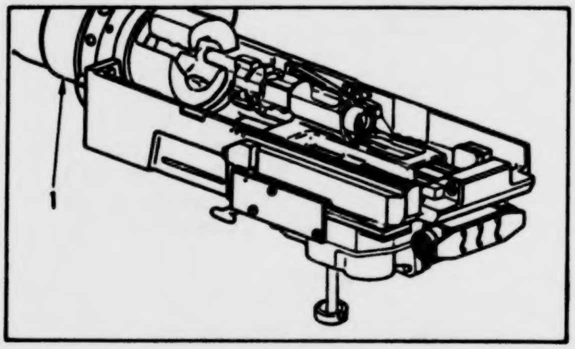
Keep your fingers away from moving parts of gun.

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

REMOVAL

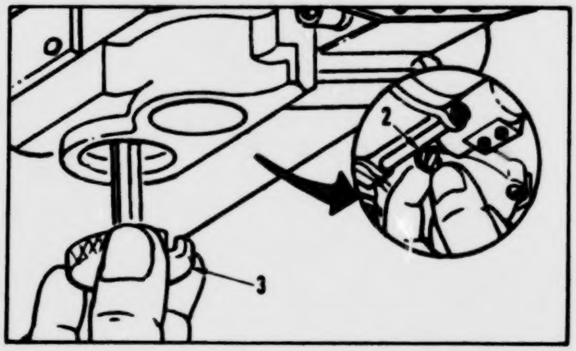
1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver (1) as shown.



2. **POSITION BOLT CARRIER.**

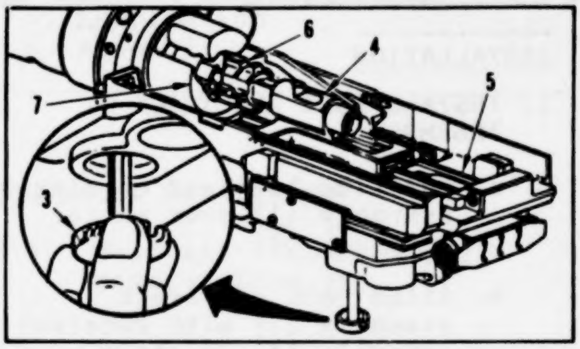
   a. Push in sear release link (2) and rotate drive shaft (3) counterclockwise one full turn. Release sear release link (2).



2-58. REMOVE/INSTALL BOLT AND TRACK ASSEMBLY

REMOVAL (cont)

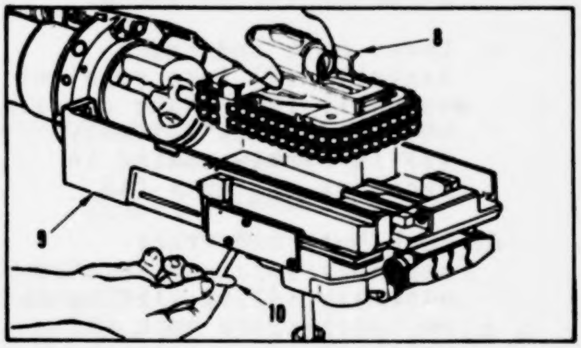
b. Rotate drive shaft (3) until bolt and carrier assembly (4) moves forward and off the rear track (5) and bolt (6) remains clear of breech (7).



3. REMOVE BOLT AND TRACK ASSEMBLY.

a. Unlock bolt and track assembly (8) from receiver (9) by pressing down on latch-track hook (10).

b. Lift bolt and track assembly (8) up and out of receiver assembly (9).

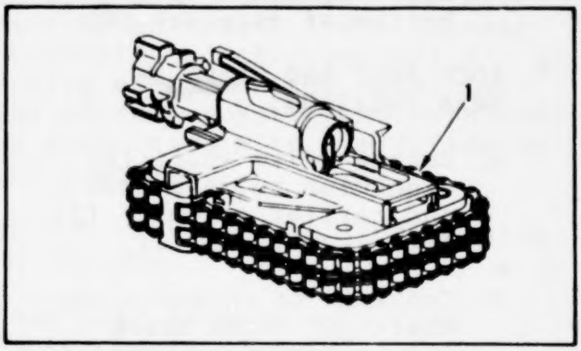


INSPECTION

1. INSPECT BOLT AND TRACK ASSEMBLY.

a. Visually inspect bolt and track assembly (1) for bent, broken, cracked or worn parts.

b. If any of the above conditions exist, replace those defective parts.



MAINTENANCE OF RECEIVER ASSEMBLY (cont)

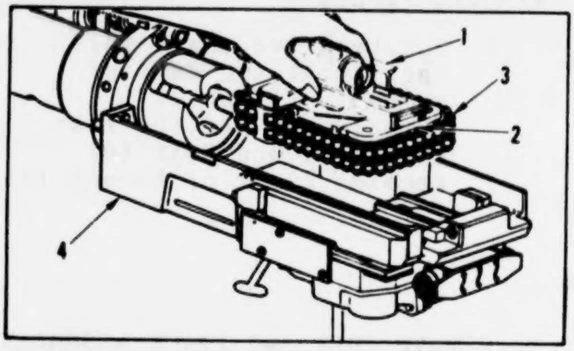
2-58. REMOVE/INSTALL BOLT AND TRACK ASSEMBLY 2-58

INSTALLATION

1. **INSTALL BOLT AND TRACK ASSEMBLY.**

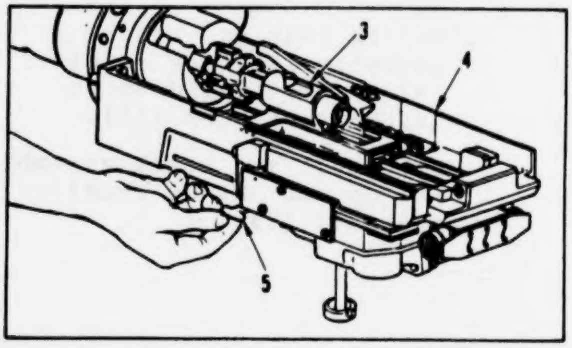
   a. Position bolt and carrier assembly (1) over center of track (2).

   b. Aline bolt and track assembly (3) with receiver assembly (4) as shown.



   c. Lower bolt and track assembly (3) into receiver assembly (4). Make certain bolt and track assembly (3) is firmly seated in receiver assembly (4).

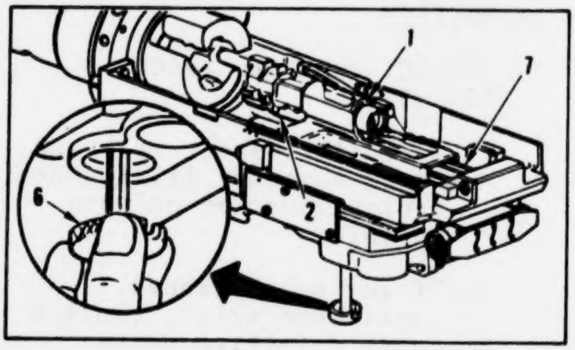
   d. Lock bolt and track assembly (3) into receiver assembly (4) by lifting up on latch-track hook (5) until it stops against bottom of receiver (4).



2. **LOCK BOLT AND TRACK IN SEAR POSITION.**

   a. Rotate drive shaft (6) clockwise to move bolt and carrier assembly (1) onto rear track (7).

   b. Continue to rotate drive shaft (6) until track (2) is locked in place.



NOTE

FOLLOW-ON MAINTENANCE: Perform receiver manual cycle check (para 2-10). Install feeder assembly (para 2-27).

2-59. REPAIR BOLT AND TRACK ASSEMBLY 2-59

This task covers:
- a. Disassembly
- b. Cleaning
- c. Inspection
- d. Lubrication
- e. Assembly

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Dry Cleaning Solvent (D3)
Wiping Rags (D4)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-12	Gun will not fire
2-13	Gun will not stop in sear position
2-14	Gun stalls
2-15	Gun cycles but will not fire
2-16	Gun fires with safety on
2-17	Gun fires intermittently
2-19	Gun fires at irregular rate
2-20	Gun fires without hangfire protection

Equipment Conditions

2-58 Bolt and track assembly removed from gun

General Safety Instructions

☠ **WARNING**

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

Do not wear jewelry when working on the gun.

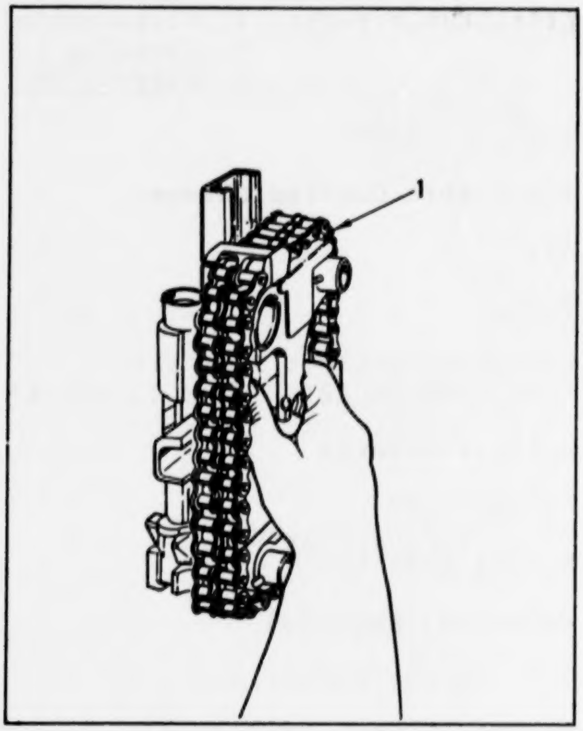
Keep your fingers away from moving parts of gun.

2-59. REPAIR BOLT AND TRACK ASSEMBLY (cont) 2-59

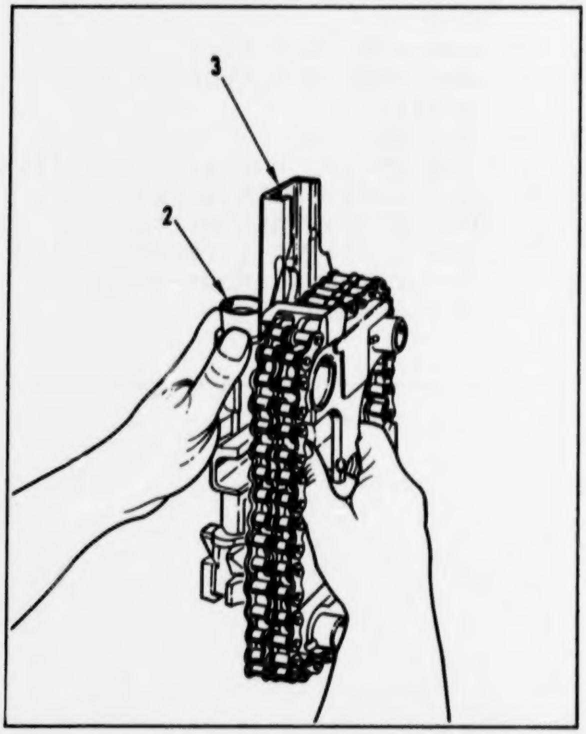
DISASSEMBLY

1. **POSITION BOLT AND TRACK ASSEMBLY.**

   a. Grasp track (1) at bottom as shown.



   b. Grasp top of bolt and carrier assembly (2) with other hand so that rear of carrier (3) is on top.

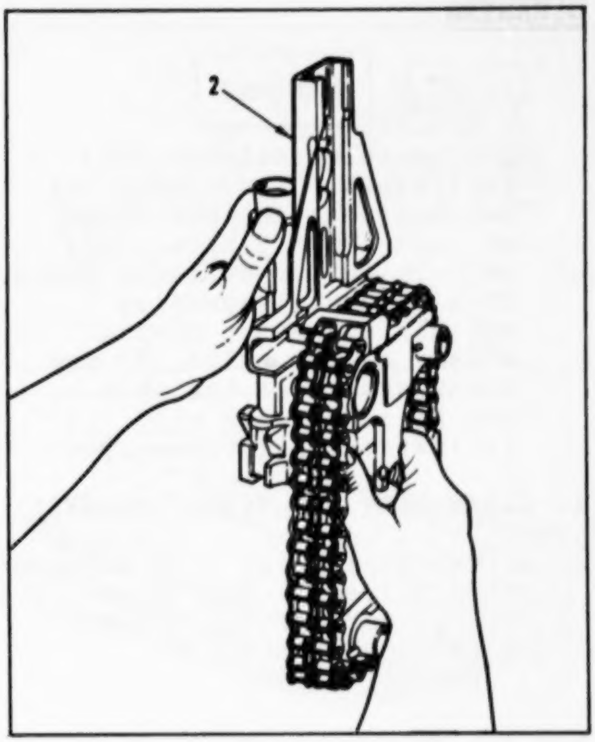


2-59. REPAIR BOLT AND TRACK ASSEMBLY (cont) 2-59

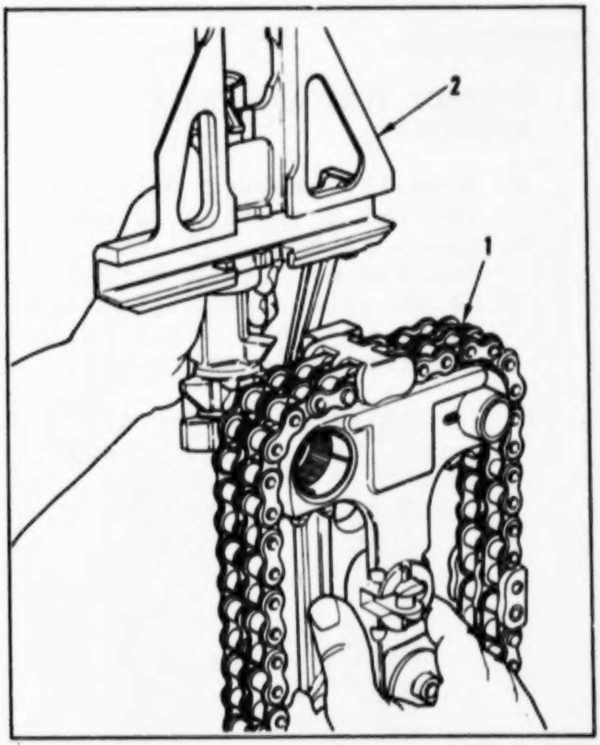
DISASSEMBLY (cont)

2. **REMOVE BOLT AND CARRIER ASSEMBLY.**

   a. Snap bolt and carrier assembly (2) upward.



   b. Remove bolt and carrier assembly (2) from track assembly (1).



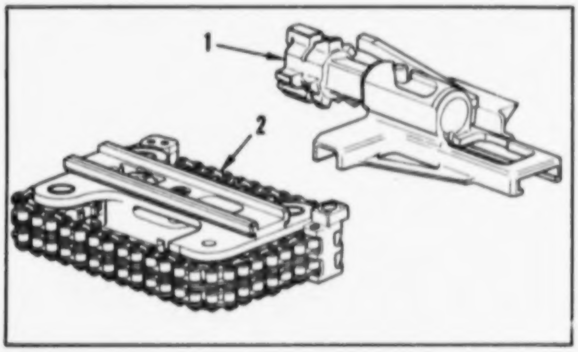
CLEANING

WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

1. **CLEAN BOLT AND TRACK ASSEMBLY.**

   a. Use wiping rag (D4) dampened in solvent. Wipe grease from bolt and carrier assembly (1) and from track assembly (2).

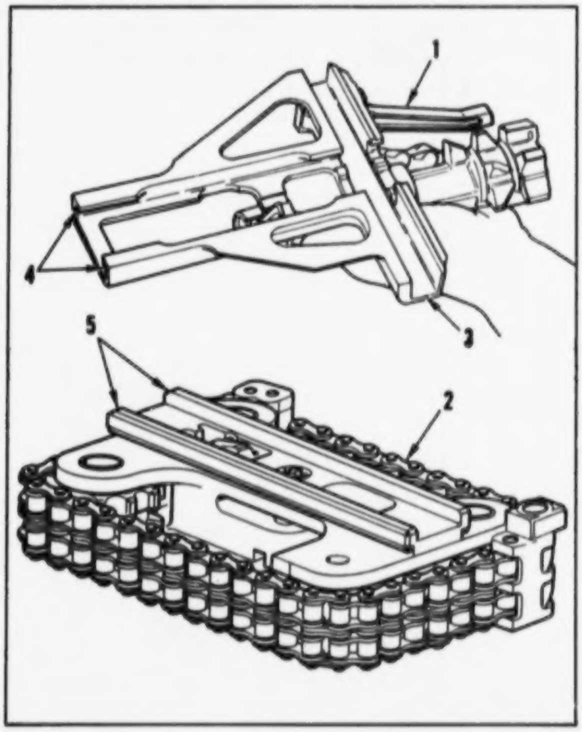


INSPECTION

1. **INSPECT BOLT AND TRACK ASSEMBLY.**

   a. Visually inspect bolt and carrier assembly (1) and track assembly (2) for cracked or broken parts. Check slider path (3), track paths (4), and track rails (5) for galls and burrs.

   b. If above conditions are found, see para 2-60 and para 2-61 for bolt and track assembly repair.

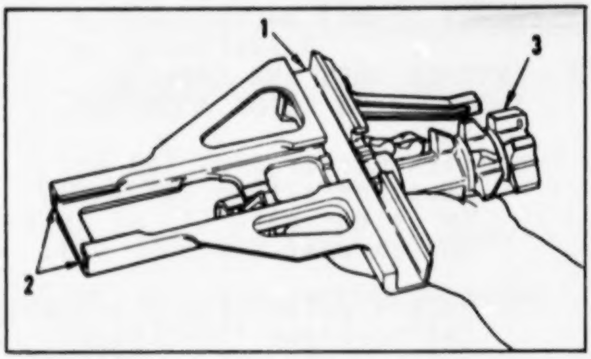


2-59. REPAIR BOLT AND TRACK ASSEMBLY (cont) 2-59

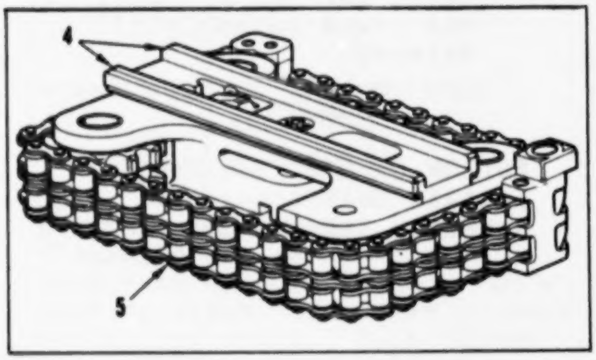
LUBRICATION

1. **LUBRICATE BOLT AND TRACK ASSEMBLY.**

   a. Use acid brush. Apply a light coat of grease (D2) to slider path (1) and track paths (2). Apply a heavy coat of grease (D2) to locking lugs of bolt (3).



   b. Use acid brush. Apply a light coat of grease (D2) to track rails (4). Apply a heavy coat of grease (D2) to roller chain assembly (5).



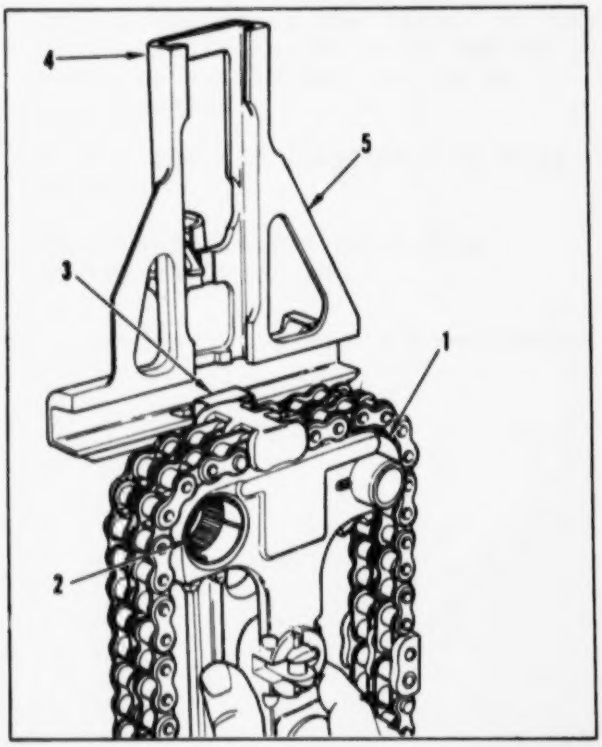
ASSEMBLY

1. **ALINE BOLT AND CARRIER ASSEMBLY WITH TRACK ASSEMBLY.**

   a. Stand track assembly (1) on end with drive sprocket (2) at upper left.

   b. Center slider (3) at rear of track assembly (1) as shown.

   c. Aline track path (4) of bolt and carrier assembly (5) with track rails and slider of track assembly (1).



MAINTENANCE OF RECEIVER ASSEMBLY (cont)

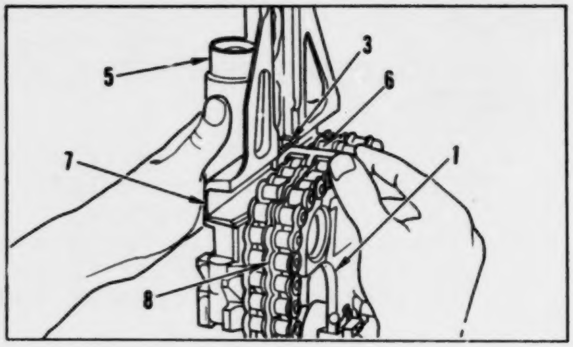
2-59. REPAIR BOLT AND TRACK ASSEMBLY (cont) 2-59

ASSEMBLY (cont)

2. **INSTALL BOLT AND CARRIER ASSEMBLY ON TRACK ASSEMBLY.**

   a. Lift master link (6) and position slider (3) in in slider path (7) of bolt and carrier assembly (5).

   b. Rotate roller chain assembly (8) to right (clockwise) until carrier assembly (5) and track assembly (1) are engaged.



NOTE

FOLLOW-ON MAINTENANCE: Install bolt and track assembly (para 2-58).

2-60. REPAIR BOLT AND CARRIER ASSEMBLY 2-60

This task covers:
- a. Disassembly
- b. Cleaning
- c. Inspection
- d. Lubrication
- e. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Dry Cleaning Solvent (D3)
Wiping Rags (D4)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-10	Receiver manual cycle check
2-11	Gun fires at reduced rate
2-12	Gun will not fire
2-14	Gun stalls
2-15	Gun cycles but will not fire
2-16	Gun fires with safety on
2-17	Gun fires intermittently
2-19	Gun fires at irregular rate
2-20	Gun fires without hangfire protection

Equipment Conditions

2-58	Bolt and track assembly removed
2-59	Bolt and carrier assembly removed

General Safety Instructions

WARNING

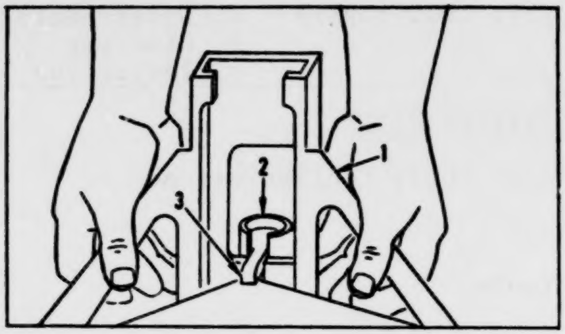
Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking areas. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

2-60. REPAIR BOLT AND CARRIER ASSEMBLY (cont) 2-60

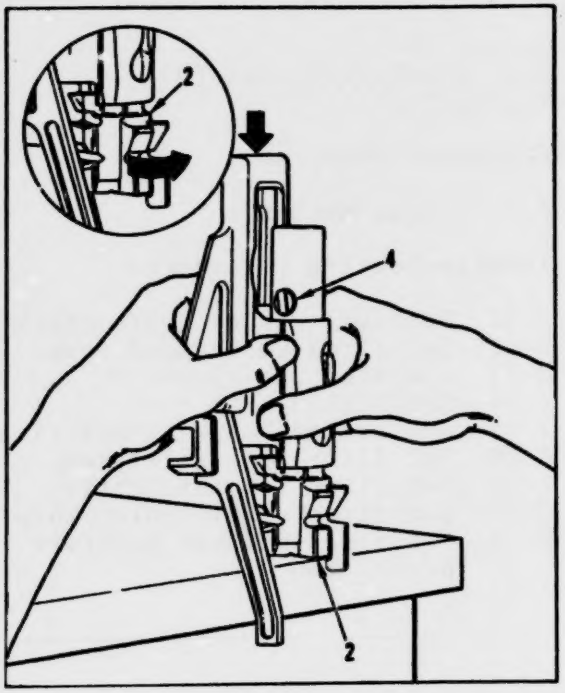
DISASSEMBLY



1. **UNLOCK BOLT FROM FORWARD LOCKING POSITION.**

   a. Hold carrier assembly (1) as shown with bolt (2) pointed downwards and firing pin tang (3) hooked on corner of working surface.

   b. Press down firmly on carrier assembly (1) until firing pin tang (3) unlocks.



2. **REMOVE FIRING PIN AND FIRING PIN SLEEVE.**

   a. Turn face of bolt (2) clockwise and place it on a solid surface.

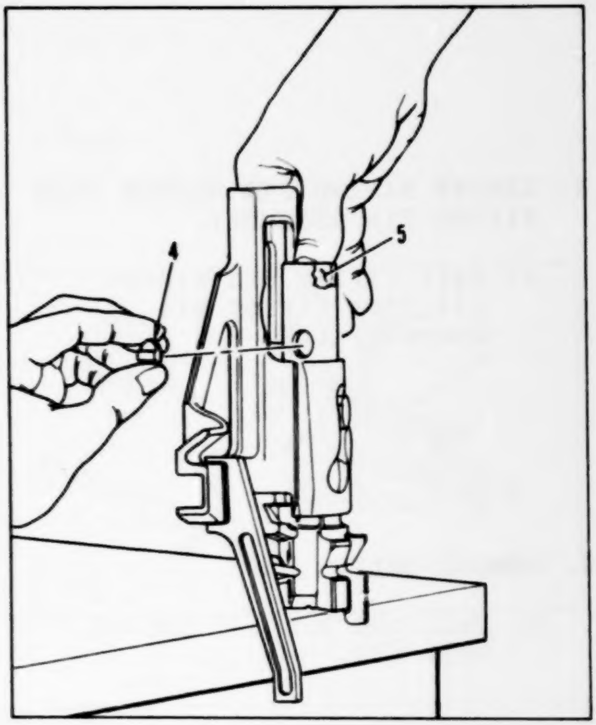
   b. Push down to unlock bolt (2) and expose firing pin sleeve keeper (4).

2-60. REPAIR BOLT AND CARRIER ASSEMBLY 2-60

NOTE

If firing pin sleeve keeper cannot be removed with fingers, use duckbill pliers.

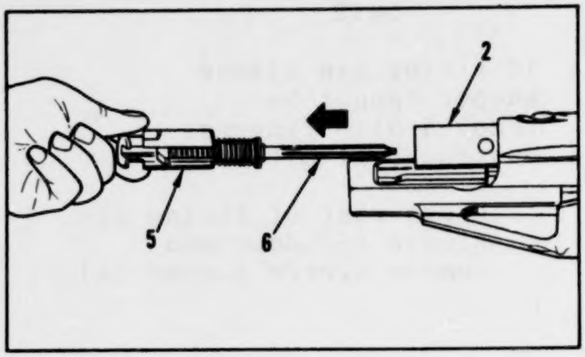
c. Press rear of firing pin sleeve (5) down and remove sleeve keeper (4).



2-60. REPAIR BOLT AND CARRIER ASSEMBLY (cont) 2-60

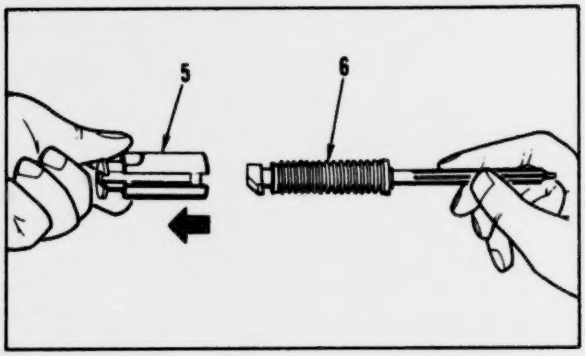
DISASSEMBLY (cont)

d. Slide firing pin assembly (6) and firing pin sleeve (5) from rear of bolt (2).



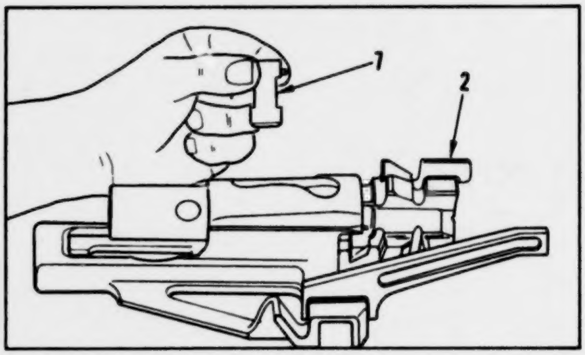
3. **REMOVE FIRING PIN SLEEVE FROM FIRING PIN ASSEMBLY.**

a. Pull firing pin sleeve (5) from firing pin assembly (6).

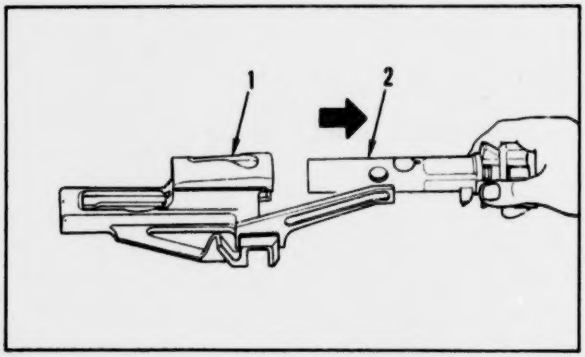


4. **REMOVE BOLT.**

a. Pull cam pin (7) out of bolt (2).



b. Remove bolt (2) from bolt carrier (1).



2-60. REPAIR BOLT AND CARRIER ASSEMBLY (cont) 2-60

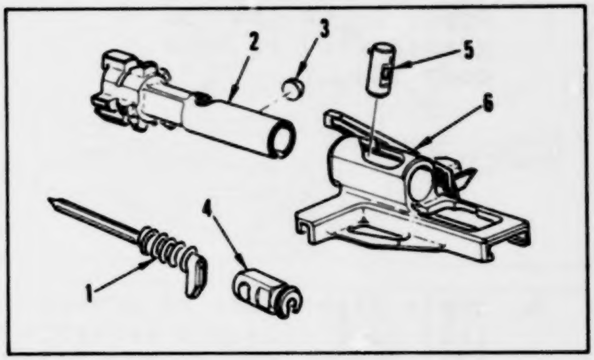
WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an pen flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

1. **CLEAN BOLT AND CARRIER ASSEMBLY PARTS.**

   a. Use cleaning brush and dry-cleaning solvent (D3). Clean firing pin assembly (1), bolt (2), firing pin sleeve keeper (3), firing pin sleeve (4), cam pin (5), and bolt carrier (6).

   b. Dry parts with a clean wiping rag (D4).

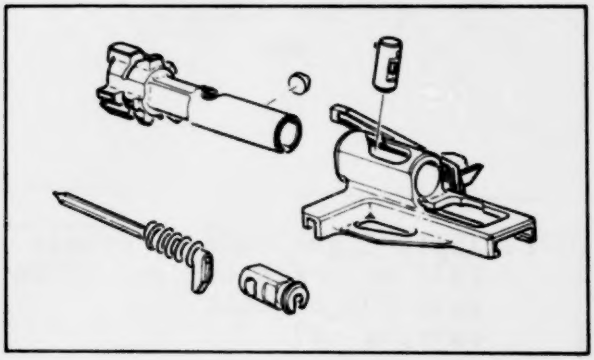


INSPECTION

1. **INSPECT BOLT AND CARRIER PARTS.**

   a. Visually inspect firing pin assembly and all bolt and carrier parts for cracks and breaks.

   b. Get new part(s) if above conditions are found. Repeat steps a and b.



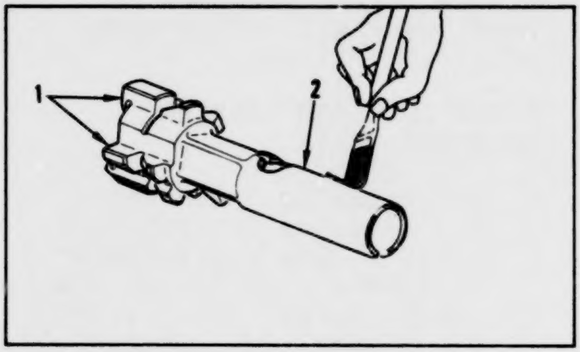
LUBRICATION

1. **LUBRICATE BOLT AND CARRIER ASSEMBLY.**

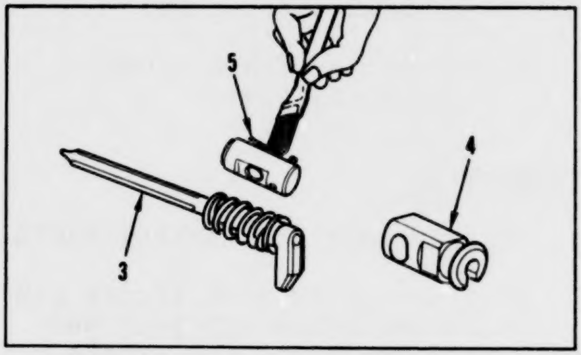
CAUTION

Do not apply grease to face of bolt. Grease will attract dust and dirt which might stop gun.

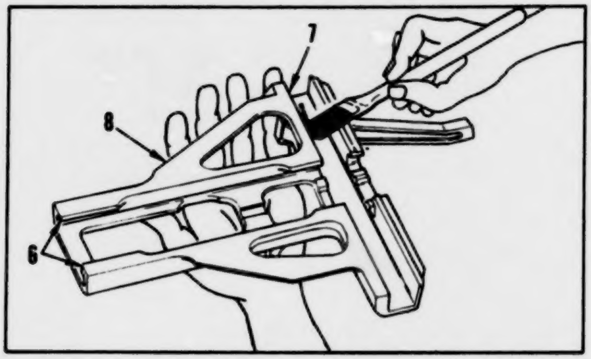
a. Use acid brush. Apply heavy coat of grease (D2) to bolt locking lugs (1). Apply light coat of grease (D2) to bolt body (2).



b. Apply light coat of grease (D2) to firing pin assembly (3), firing pin sleeve (4), and cam pin (5).



c. Apply light coat of grease (D2) to track (6) and slider path (7) of bolt carrier (8).

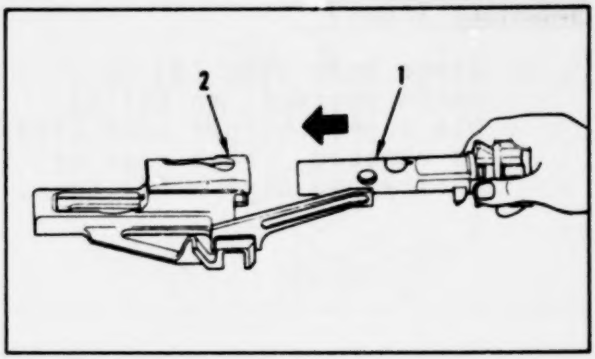


2-60. REPAIR BOLT AND CARRIER ASSEMBLY (cont) 2-60

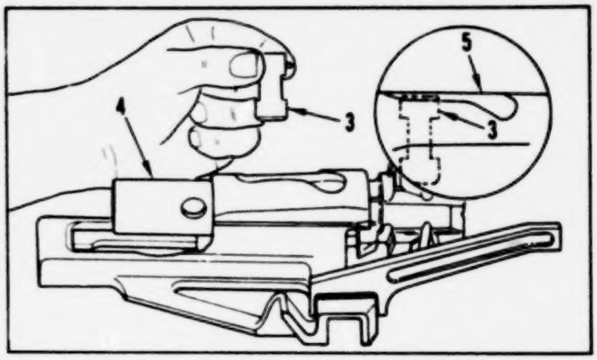
ASSEMBLY

1. **INSTALL BOLT.**

   a. Slide rear of bolt (1) through front of bolt carrier (2).

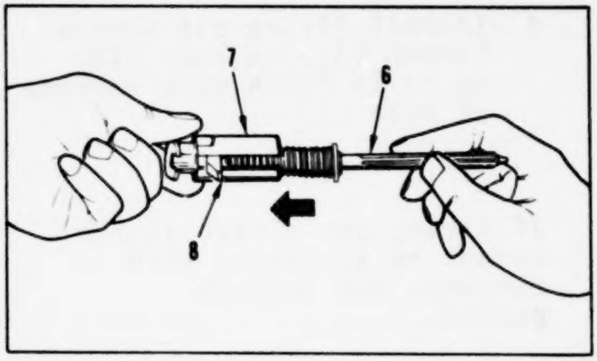


   b. Install cam pin (3) into bolt (4) so that top of cam pin (3) is not above bolt carrier (5).

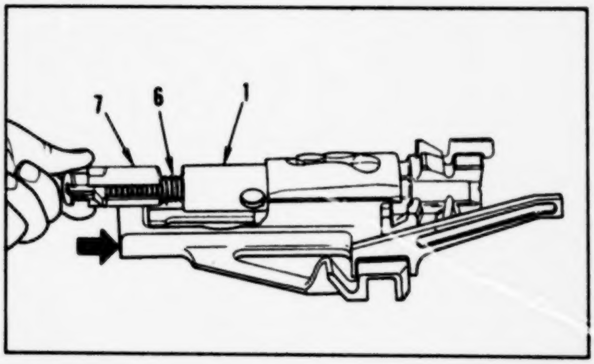


2. **INSTALL FIRING PIN AND FIRING PIN SLEEVE.**

   a. Slide rear of firing pin assembly (6) through front of firing pin sleeve (7). Pass firing pin tang (8) along groove in firing pin sleeve (7).



   b. Slide firing pin assembly (6) and firing pin sleeve (7) into rear of bolt (1).

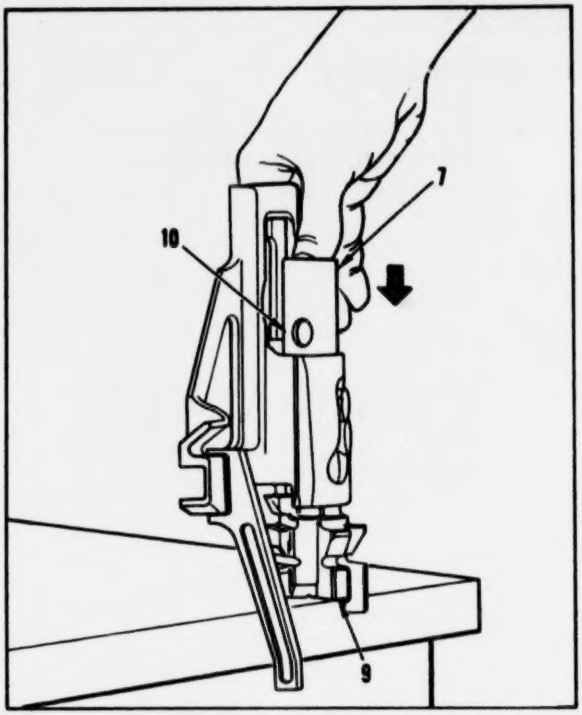


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-60. REPAIR BOLT AND CARRIER ASSEMBLY (cont) 2-60

ASSEMBLY (cont)

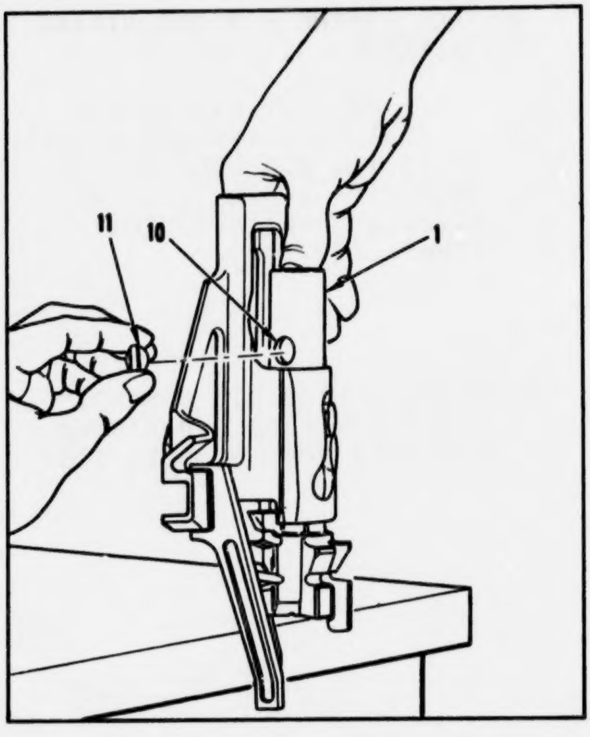
c. Place bolt face (9) on a solid surface, so firing pin sleeve keeper slot (10) is exposed. Push rear of firing pin sleeve (7) down.



d. Install firing pin sleeve keeper (11) in slot (10) so it is flush with surface of bolt (1).

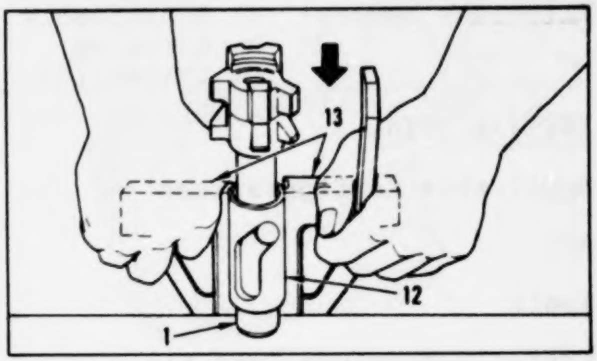
NOTE

If firing pin sleeve keeper cannot be installed with fingers, use duckbill pliers.



2-60. REPAIR BOLT AND CARRIER ASSEMBLY (cont) 2-60

ASSEMBLY (cont)



3. **LOCK BOLT.**

   a. Turn bolt and carrier assembly (12) over so only rear of bolt (1) rests on a solid surface.

   b. Place hand on each side of carrier track path (13) and push down until bolt (1) locks.

NOTE

FOLLOW-ON MAINTENANCE:
Install bolt and carrier assembly (para 2-59).
Install bolt and track assembly (para 2-58).

2-61. REPAIR TRACK ASSEMBLY 2-61

This task covers:
- a. Disassembly
- b. Cleaning
- c. Inspection
- d. Lubrication
- e. Assembly

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Dry-Cleaning Solvent (D3)
Wiping Rag (D4)
Packing (3)
  M25998/1-022 (Fig. 9, Item 1, App C)
Spring Pin
  12524618-1 (Fig. 9, Item 16, App C)
Spring Pin
  MS 16562-66 (Fig. 9, Item 9, App C)

Personnel Required

45T Turret Mechanic
Helper

Troubleshooting References

2-10	Receiver manual cycle check
2-11	Gun fires at reduced rate
2-12	Gun will not fire
2-13	Gun will not stop in sear position
2-15	Gun cycles but will not fire
2-16	Gun fires with safety on
2-17	Gun fires intermittently
2-19	Gun fires at irregular rate
2-20	Gun fires without hangfire protection

Equipment Conditions

2-58	Bolt and track assembly removed
2-59	Bolt and carrier assembly removed

General Safety Instructions

WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

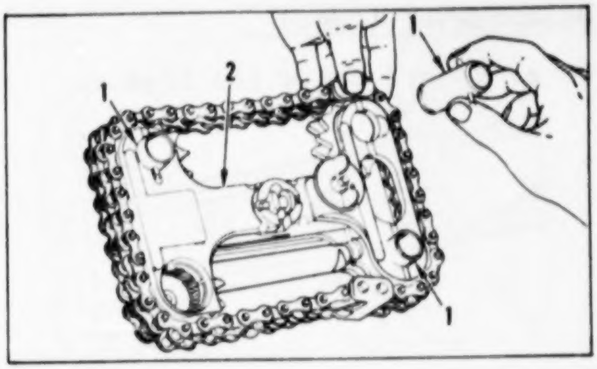
Wear eye protection when removing springs or using striking instruments. You can be blinded if flying springs or chips hits you in the eye. Get medical help if flying springs or chips hits you in the eye.

2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

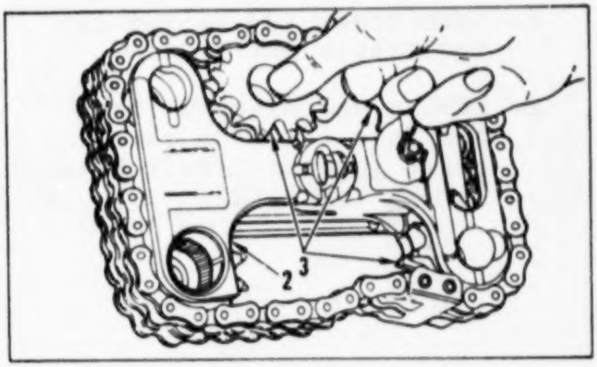
DISASSEMBLY

1. **REMOVE CHAIN AND SPROCKETS.**

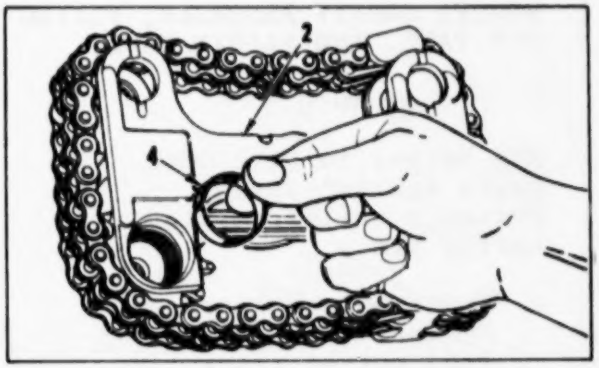
   a. Pull three sprocket shafts (1) from track (2).



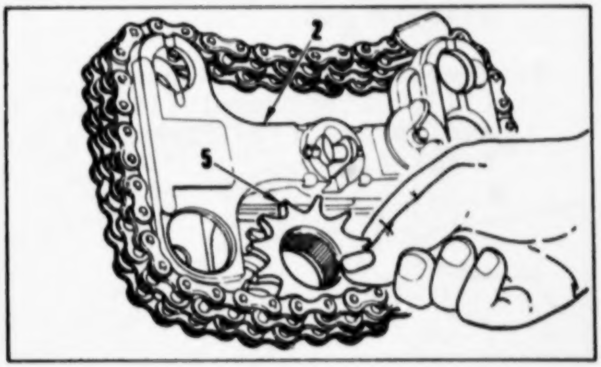
   b. Remove three idler sprockets (3) from track (2).



   c. Pull drive sprocket retainer (4) from track (2).



   d. Remove drive sprocket (5) from track (2).

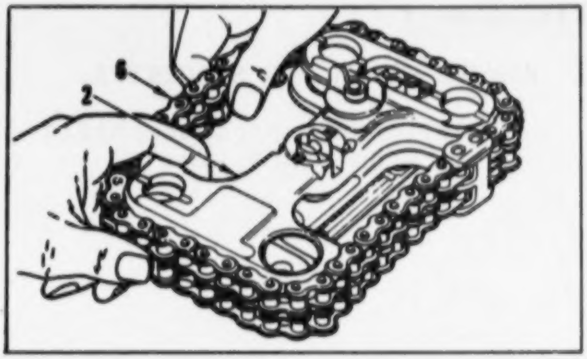


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

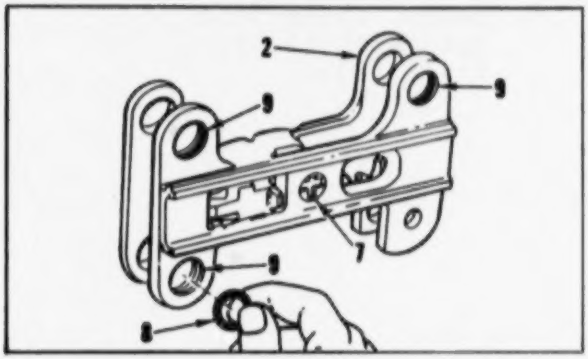
DISASSEMBLY (cont)

e. Remove chain (6) from track (2).



f. Turn track (2) so you can see clevis nut (7).

g. Remove and discard three packings (8) from three idler sprocket shaft holes (9) in track (2).

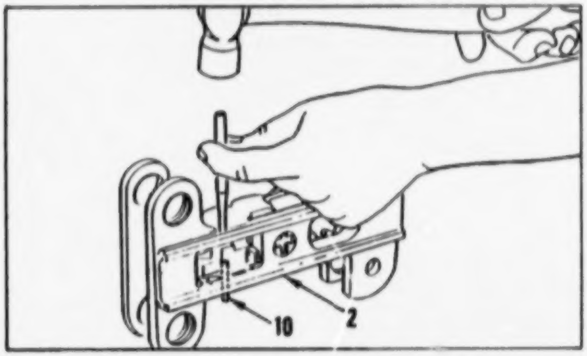


2. **REMOVE SAFETY ASSEMBLY, FIRING PIN PAWL, AND SAFETY PAWL.**

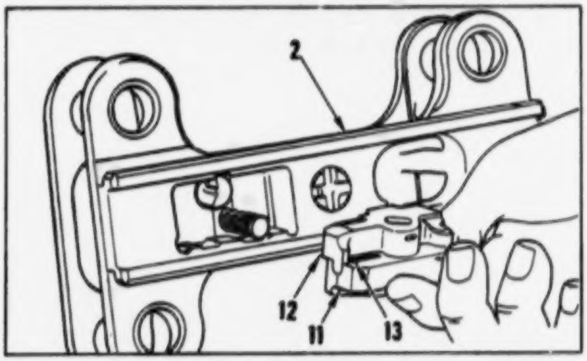
NOTE

Use helper to hold both pawls against spring pressure while removing spring pin.

a. Use 1/4-inch punch and hammer. Tap spring pin (10) out of track (2). Discard pin.



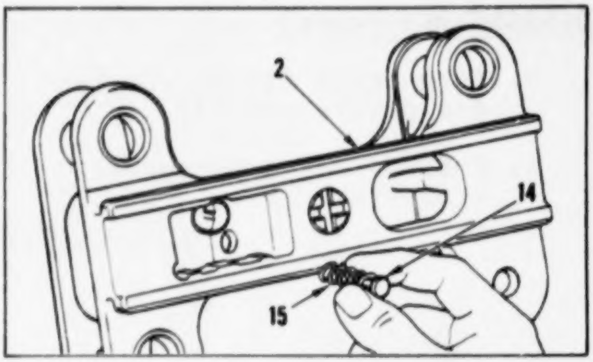
b. Remove firing pin pawl (11), safety pawl (12), and spring (13) from track (2).



2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

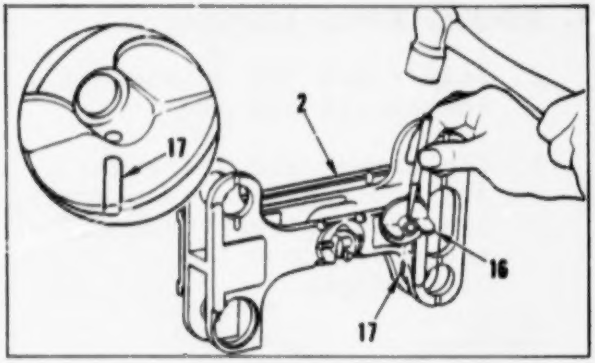
DISASSEMBLY (cont)

c. Remove pawl pin (14) and pawl spring (15) from track (2).

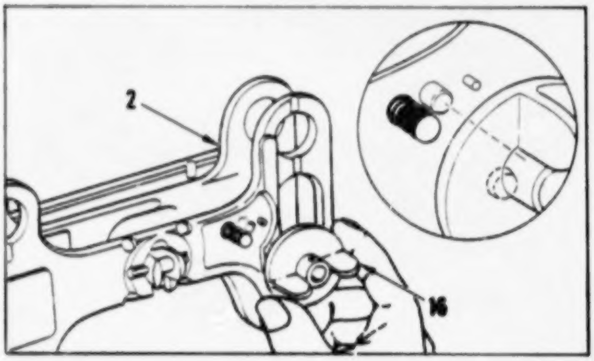


d. Turn track (2) so you can see safety handle (16).

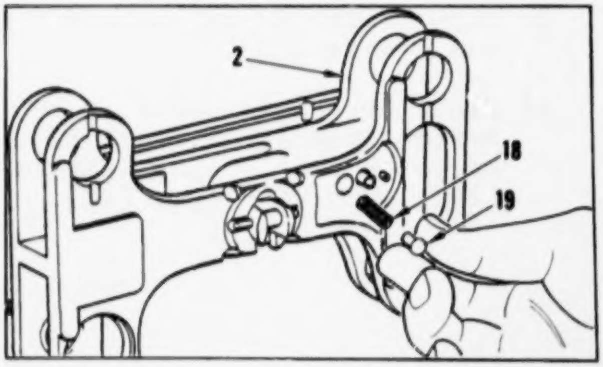
e. Use hammer and 3/32-inch drive pin punch. Tap spring pin (17) from safety handle. Discard pin.



f. Hold safety handle (16). Remove drive pin punch. Remove safety handle (16) from track (2).



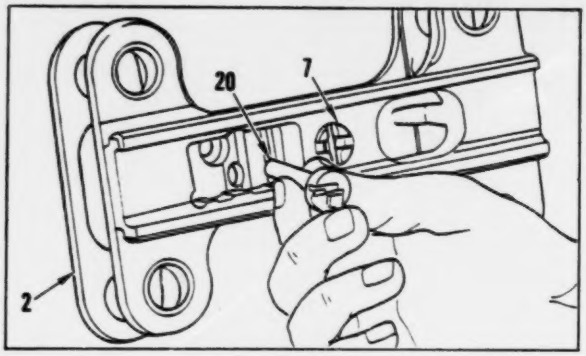
g. Pull detent spring (18) and pawl pin (19) from track (2).



DISASSEMBLY (cont)

h. Turn track (2) so you can see clevis nut (7).

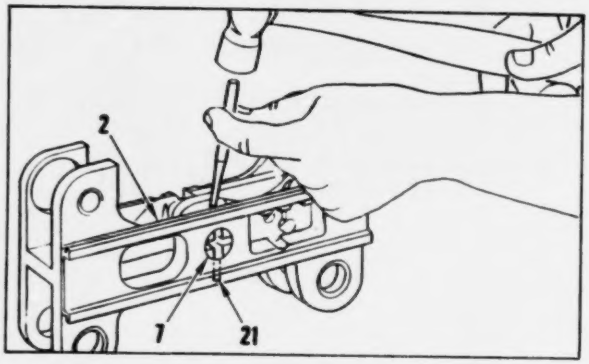
i. Pull safety actuator (20) from track (2).



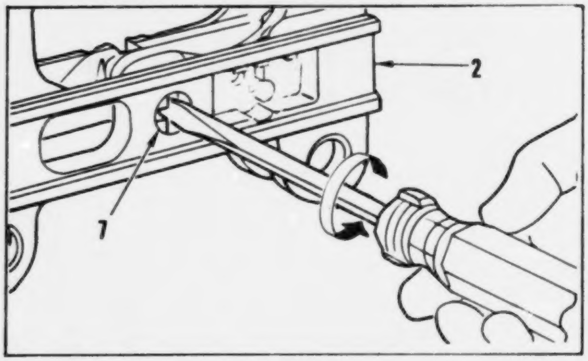
3. **REMOVE CLEVIS ASSEMBLY.**

a. Turn track (2) so you can see clevis nut (7).

b. Use hammer and 1/4-inch drive pin punch. Tap spring pin (21) out of track (2) and clevis nut (7). Discard pin.

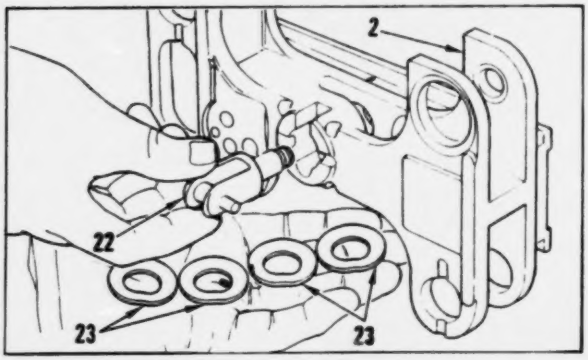


c. Use 5/8 inch flat-tip screwdriver. Remove clevis nut (7).



d. Turn track (2) so you can see clevis (22).

e. Place open hand under bottom opening in track (2) to catch four spring washers (23). Remove clevis (22).

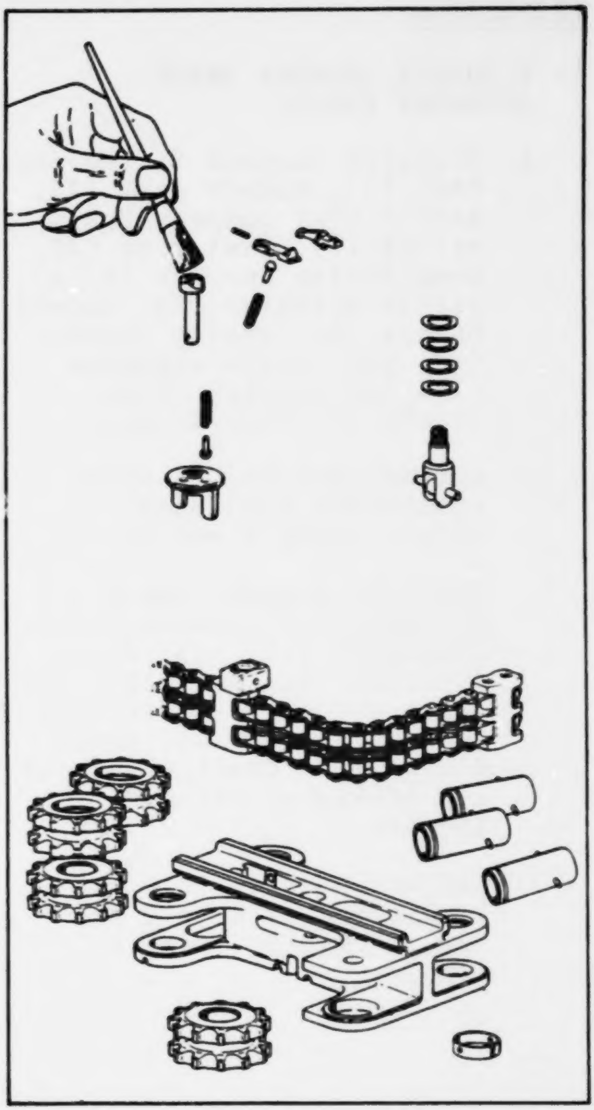


2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

CLEANING

WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. It may cause cracks in the skin and in some cases mild irritation or inflammation.



1. **CLEAN TRACK ASSEMBLY PARTS.**
   a. Use paint (cleaning) brush and dry cleaning solvent (D3). Clean all parts shown.

   b. Dry parts with a clean wiping rag (D4).

2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

INSPECTION

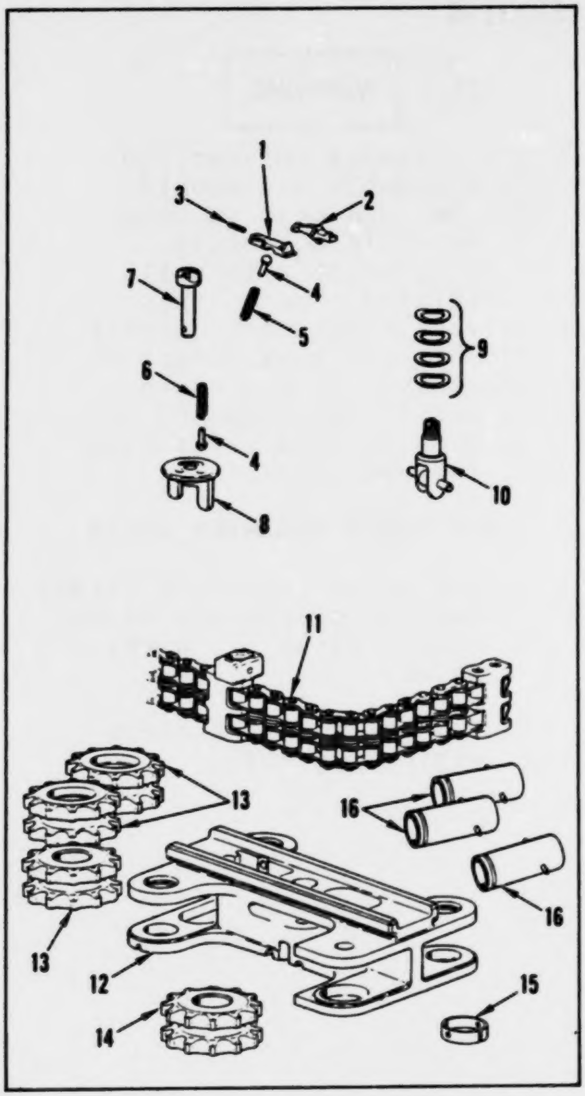
1. **VISUALLY INSPECT TRACK ASSEMBLY PARTS.**

   a. Visually inspect firing pin pawl (1), safety pawl (2), safety pawl compression spring (3), pawl pins (4), compression springs (5, 6), safety actuator (7), safety handle (8), spring washers (9), and clevis assembly (10) for cracks, chips, breaks or other damage.

   b. Get new part(s) if above conditions are found. Repeat steps a and b.

   c. Visually inspect chain assembly (11), track (12), sprockets (13, 14), drive sprocket retainer (15), and idler sprocket shafts (16) for cracks, breaks, bends and galls. Check sprockets for broken or chipped teeth.

   d. Get new part(s) if conditions in step c are found. Repeat steps c and d.



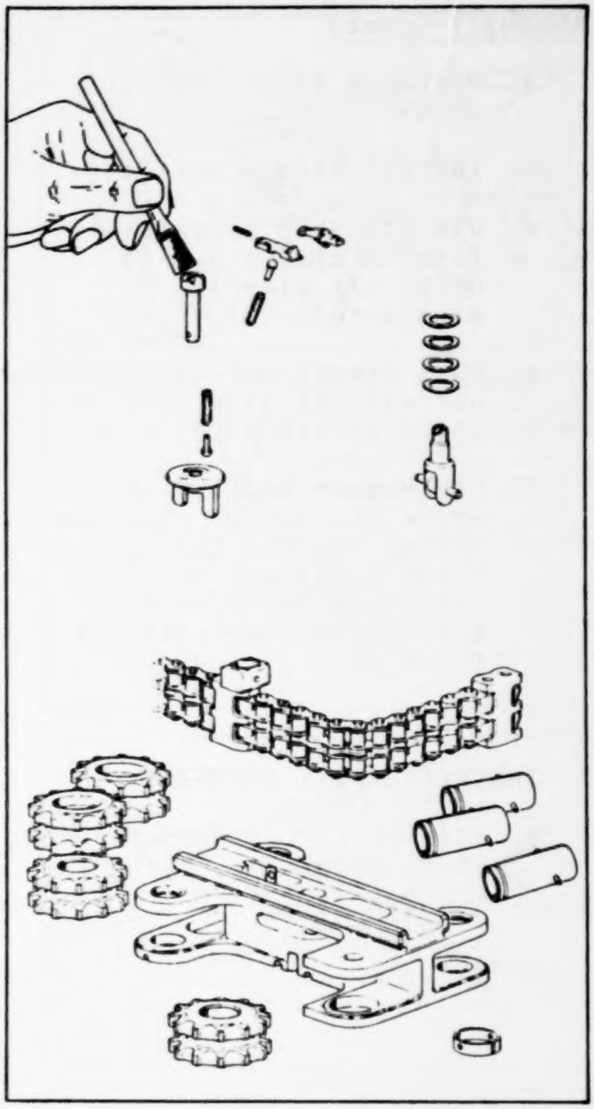
2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

LUBRICATION

1. **LUBRICATE TRACK ASSEMBLY PARTS.**

   a. Use acid brush. Apply light coat of grease (D2) to surfaces of all parts shown.

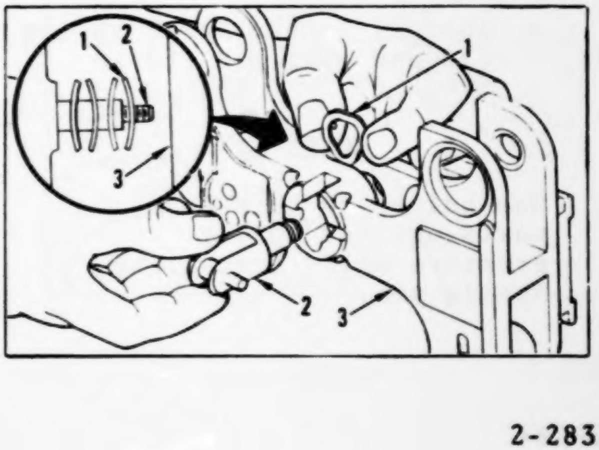
   b. Wipe off excess grease.



ASSEMBLY

1. **INSTALL CLEVIS ASSEMBLY.**

   a. Place four spring washers (1) in position in track and install clevis (2) through track (3) and washers (1) as shown.



MAINTENANCE OF RECEIVER ASSEMBLY (cont)

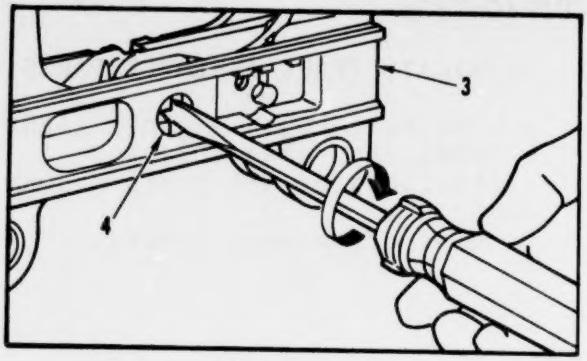
2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

ASSEMBLY (cont)

b. Position track (3) as shown.

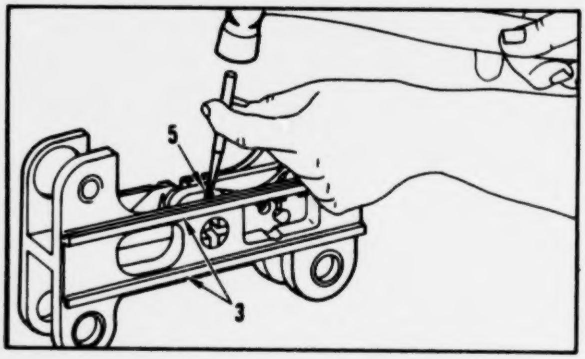
c. Install clevis nut (4).

d. Use flat-tip screwdriver. Tighten clevis nut (4) until all play is eliminated.



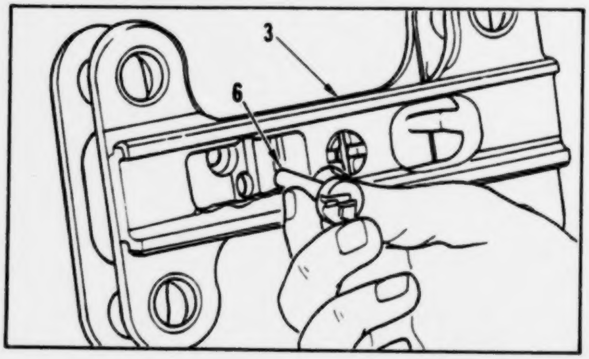
e. Turn clevis nut (4) to aline nearest nut slot with pin holes in track (3).

f. Use hammer and 1/4-inch drive pin punch. Tap new spring pin (5) through track holes and nut slot until pin is flush with surface on both sides of track (3).



2. **INSTALL SAFETY ASSEMBLY.**

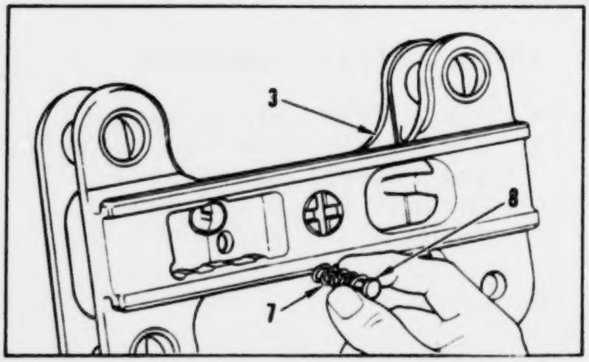
a. Install safety actuator (6), shaft end first, into track (3).



b. Install longest pawl spring (7) and pawl pin (8) in track (3).

NOTE

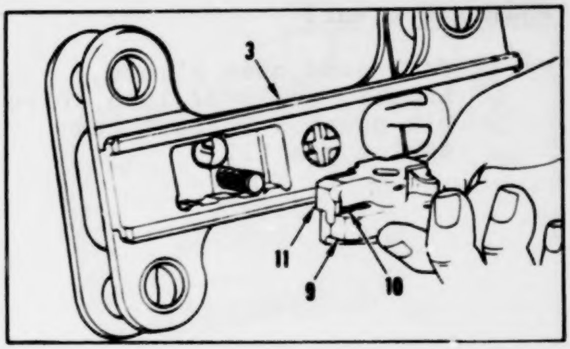
Use helper to hold both pawls against spring pressure while installing spring pin.



2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

ASSEMBLY (cont)

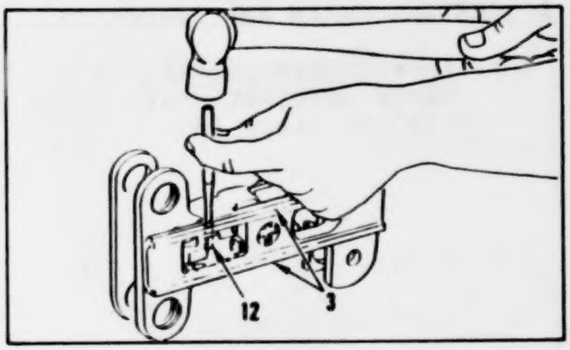
c. Install firing pin pawl (9), safety pawl spring (10), and safety pawl (11) in track (3) as shown.



NOTE

Use helper to hold both pawls and aline hole while pin is being installed.

d. Use hammer and 1/4-inch drive pin punch. Drive new spring pin (12) until pin is flush with surface on both sides of track (3).

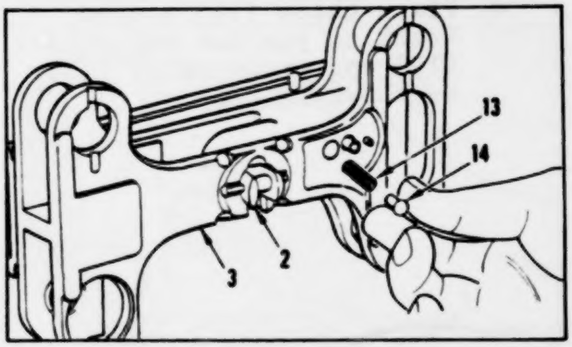


NOTE

The firing pin pawl and safety pawl must move freely when pressed. If binding occurs, both pawls should be removed, checked for burrs, distorted spring binding of roll pin and hole in slot, etc., relubricated, and reinstalled.

e. Turn track (3) so you can see clevis (2).

f. Install shorter detent spring (13) and pawl pin (14) in track (3).

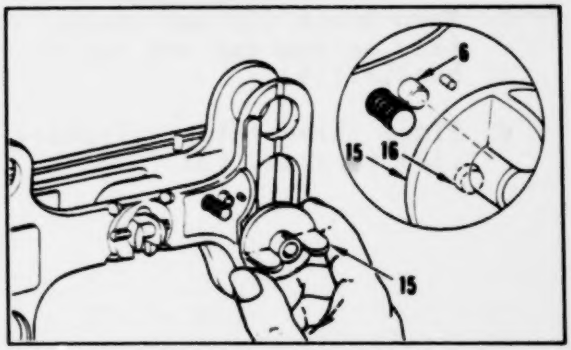


NOTE

You may need to use a helper to hold safety handle while you install spring pin.

g. Place safety handle (15) on safety actuator (6). Seat pawl pin into detent (16) on bottom of safety handle (15).

h. Aline spring pin holes in safety actuator (6) and safety handle (15).

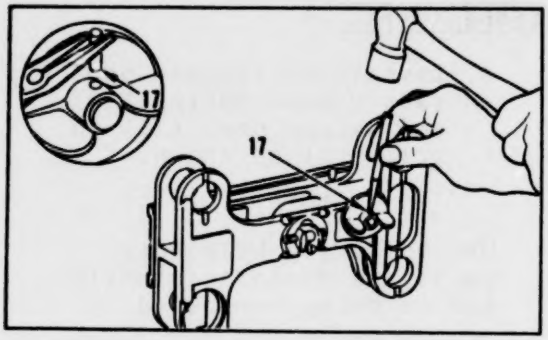


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

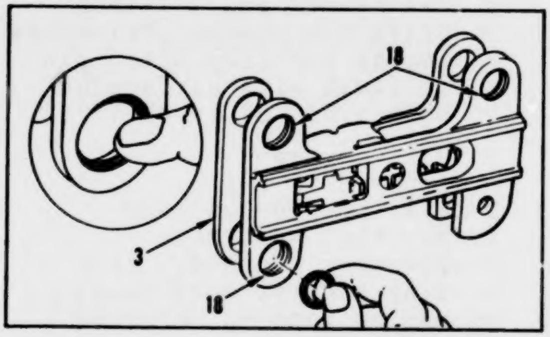
ASSEMBLY (cont)

i. Use round nose pliers, hammer, and 3/32-inch drive pin punch. Install new spring pin (17).

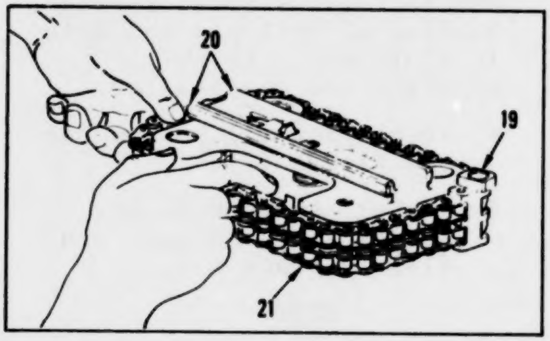


3. **INSTALL CHAIN AND SPROCKETS.**

a. Install new packing in three sprocket shaft holes (18) in track (3).

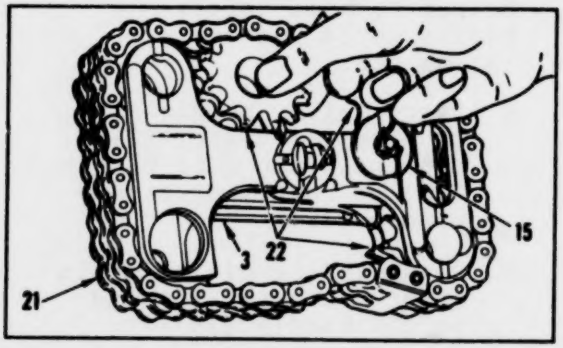


b. Place chain (21) around track so you can see slider (19) and track rails (20) as shown.



c. Turn track (3) and chain (21) so you can see safety handle (15).

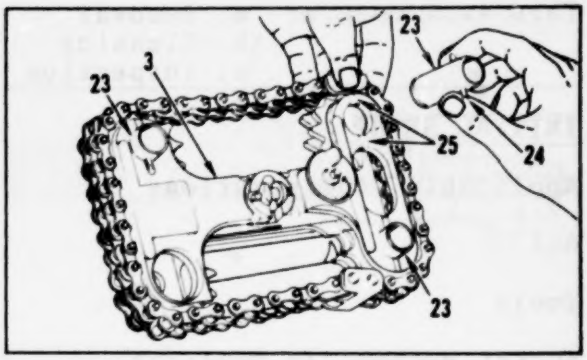
d. Place three idler sprockets (22) in track (3).



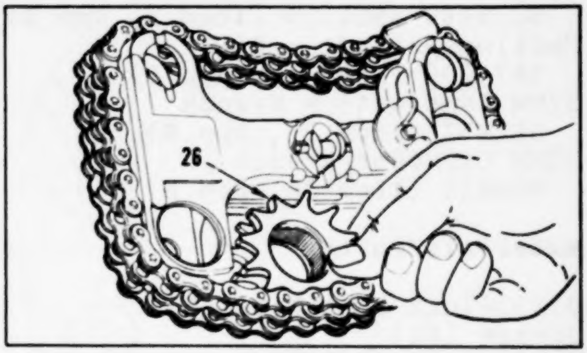
2-61. REPAIR TRACK ASSEMBLY (cont) 2-61

ASSEMBLY (cont)

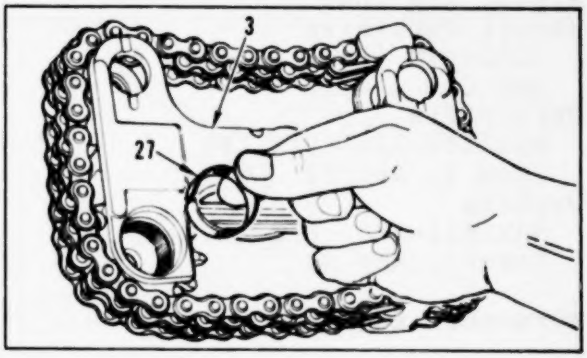
e. Aline track (3) and sprocket holes. Install three sprocket shafts (23), long end first, into track (3). Seat shaft pins (24) into grooves (25) on track (3) as shown.



f. Place drive sprocket (26) in track. Aline track and sprocket holes.



g. Install drive sprocket retainer (27) in track (3).



NOTE

FOLLOW-ON MAINTENANCE:
Install bolt and carrier assembly (para 2-59).
Install bolt and track assembly (para 2-58).

2-62. REPLACE RECOIL MECHANISM 2-62

This task covers:
- a. Removal
- b. Cleaning
- c. Inspection
- d. Lubrication
- e. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
  SC 5180-95CLB19 (Item 1, App B)
Packing Extractor Kit
  887-200 (Item 21, App B)
32MM Combination Wrench
  OEXM32 (Item 25, App B)
32MM Crowfoot Wrench
  FCOM32 (Item 26, App B)

Materials/Parts

0.032-Inch Lock Wire (D1)
Grease (D2)
Wiping Rag (D4)
Recoil Mechanism
  12524420 (Fig. 6, Item 6, App C)
Cotter Pin
  MS24665-283 (Fig. 6, Item 2, App C)
Packing
  NAS1611-326 (Fig. 6, Item 5, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-18 Excessive recoil or inadequate dampening

General Safety Instructions

☠ **WARNING**

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

CAUTION

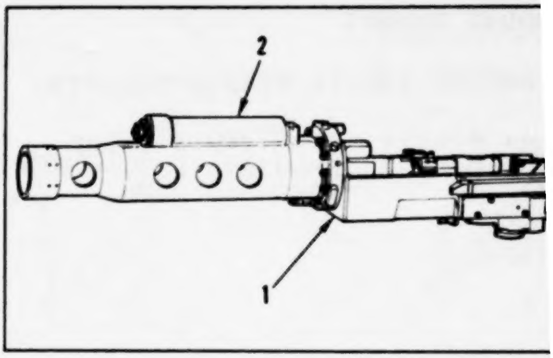
Do not drop lock wire pieces into gun. Wire can get between moving parts and damage gun.

2-62. REPLACE RECOIL MECHANISM (cont)

REMOVAL

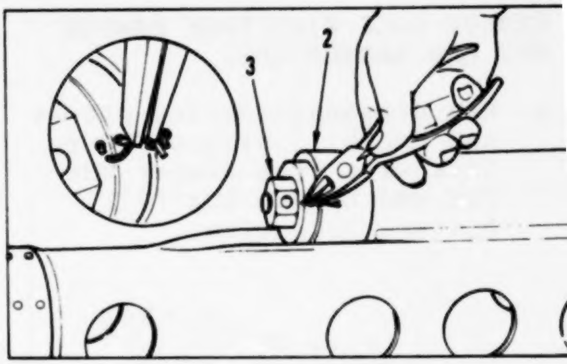
1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver assembly (1) with recoil housing (2) on top as shown.



2. **REMOVE LOCK WIRE FROM RECOIL HOUSING AND RECOIL SPRING CAP.**

   a. Use diagonal-cutting pliers and duckbill pliers. Cut lock wire from recoil housing (2) and recoil spring cap (3). Discard lock wire.

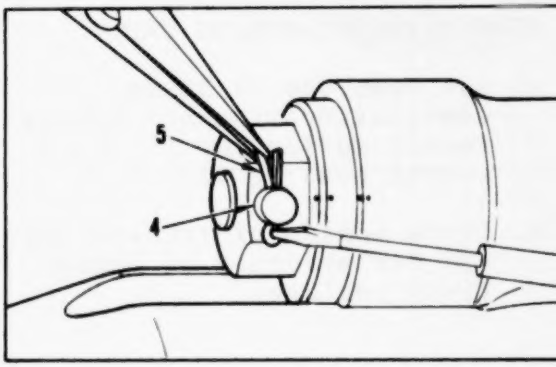


3. **REMOVE COTTER PIN FROM RECOIL SPRING CAP PIN.**

   NOTE

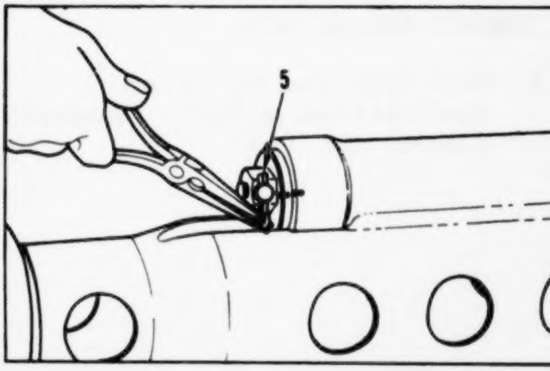
   Cap may have to be turned in order to remove cotter pin or cap pin.

   a. Use flat-tip screwdriver. Insert screwdriver tip in eye of cotter pin to keep pin (4) from turning.



   b. Use round-nose pliers. Straighten both ends of cotter pin (5).

   c. Use round-nose pliers. Remove cotter pin (5). Discard cotter pin.

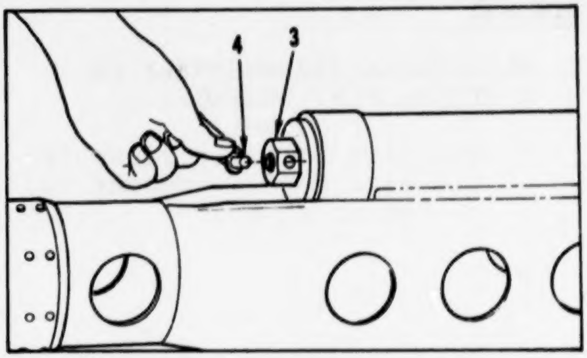


2-62. REPLACE RECOIL MECHANISM (cont) 2-62

REMOVAL (cont)

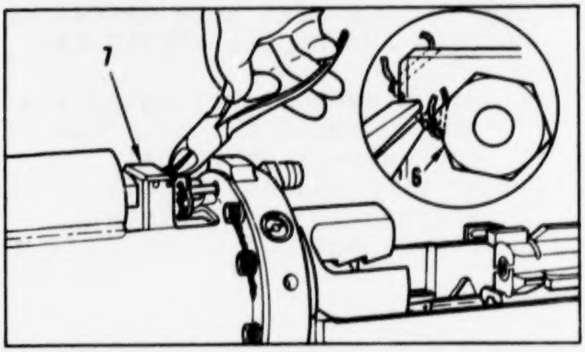
4. REMOVE RECOIL SPRING CAP PIN.

a. Remove recoil spring cap pin (4) from cap (3).



5. REMOVE LOCK WIRE FROM DAMPER NUT AND BREECH LUG.

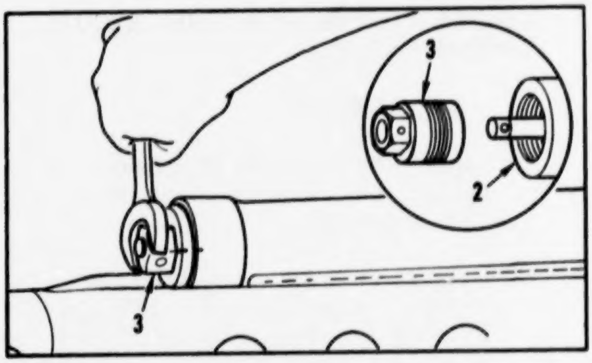
a. Use diagonal-cutting pliers and duckbill pliers. Cut lock wire from damper nut (6) and breech lug (7). Discard lock wire.



6. REMOVE RECOIL SPRING CAP.

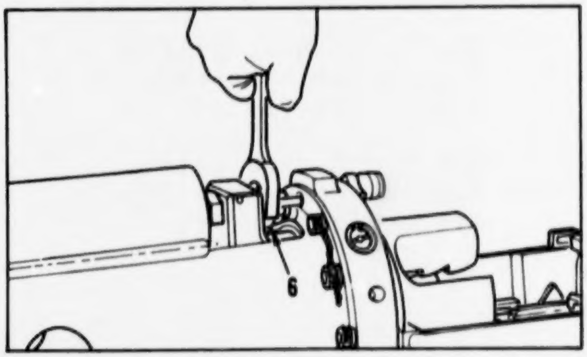
a. Use open end of 32-mm combination wrench. Remove recoil spring cap (3) from recoil housing (2).

b. Check inside of removed cap (3) for evidence of damper fluid leakage.



7. REMOVE DAMPER NUT.

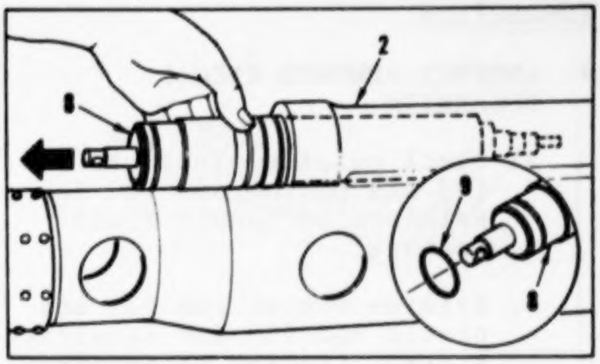
a. Use open end of 32-mm combination wrench. Remove damper nut (6).



2-62. REPLACE RECOIL MECHANISM (cont) 2-62

REMOVAL (cont)

8. **REMOVE RECOIL MECHANISM.**



   a. Pull recoil mechanism (8) forward out of recoil housing (2).

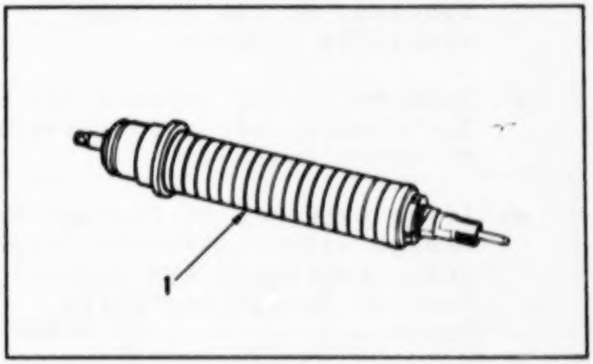
CAUTION

Avoid packing groove damage. Use only brass extractor tool for packing removal.

   b. Use extractor kit brass tool. Remove and discard packing (9).

CLEANING

1. **CLEAN REMOVED RECOIL MECHANISM.**

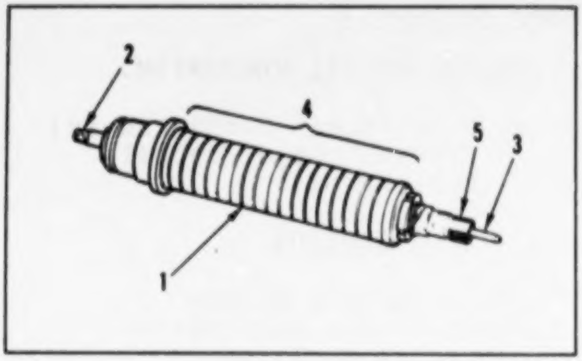


CAUTION

Avoid damper fluid contamination. Do not get grease on damper rod or piston rod.

   a. Use clean, dry rag (D4). Wipe all grease from outside of recoil mechanism (1).

INSPECTION



1. **INSPECT REMOVED RECOIL MECHANISM.**

   a. Check outside of damper rod (2) and piston rod (3) for evidence of damper fluid leakage.

   b. Examine damper rod (2) and piston rod (3) for scratched, scored, cracked or grooved diameters. Check for cracks around pin holes.

   c. Inspect stacked springs (4) for cracks or other damage. Check for unequal spring spacing; no two springs should be touching.

   d. Examine spring support (5) for cracks, stripped threads, or other damage.

   e. If no evidence of leakage or damage exists, service (top-off), lubricate and install removed recoil mechanism (para 2-65).

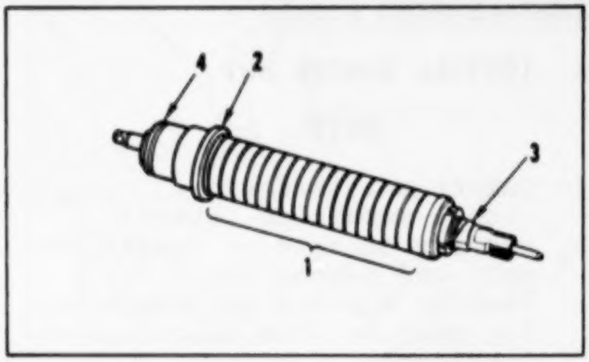
   f. If there is evidence of leakage or damage, get a new recoil mechanism. Install new recoil mechanism, beginning with INSPECTION step 2.

2. **INSPECT NEW RECOIL MECHANISM.**

   a. Visually inspect new recoil mechanism (1) for cracks, dents, oil seepage, and unequal spacing of stacked springs (4).

   b. Get a new recoil mechanism if above conditions are found. Repeat steps a and b.

LUBRICATION



1. **LUBRICATE RECOIL MECHANISM.**

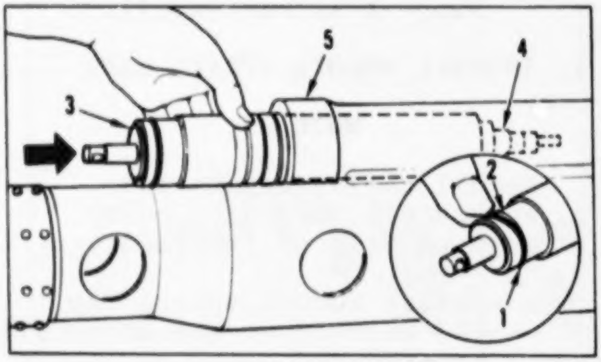
CAUTION

Avoid damper fluid contamination. Do not get grease on damper rod or piston rod, support extension threads near piston rod, or filler hole area on damper housing cap.

a. Use acid brush. Apply heavy coat of grease (D2) to springs (1) and spacer (2).

b. Use acid brush. Apply light coat of grease (D2) to support extension (3) and outside diameter of damper housing cap (4).

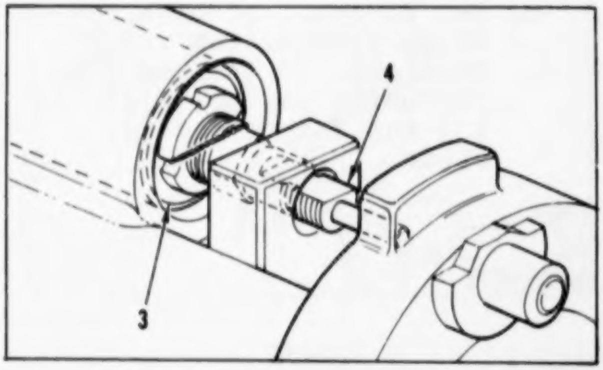
INSTALLATION



1. **INSTALL RECOIL MECHANISM.**

a. Install new packing (1) in damper housing cap groove (2).

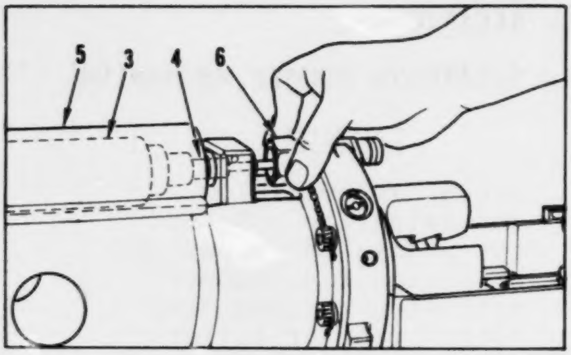
b. Insert recoil mechanism (3), support extension end (4) first, into recoil housing (5).



c. Position recoil mechanism (3) so flat side of support extension (4) faces up as shown.

2-62. REPLACE RECOIL MECHANISM (cont) 2-62

INSTALLATION (cont)



2. **INSTALL DAMPER NUT.**

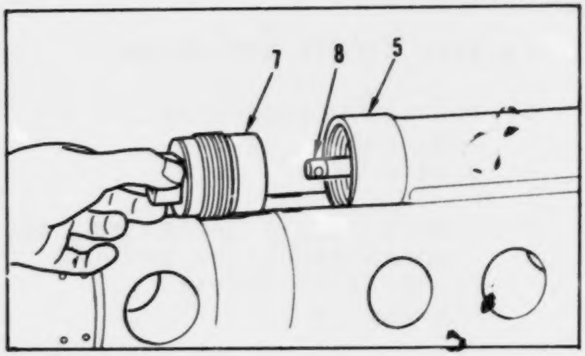
NOTE

Damper nut threads, recoil mechanism threads, bearing surface of damper nut, and damper nut bearing surface on breech lug must be free of lubricant.

a. Pull recoil mechanism (3) back out of recoil housing (5) one inch. Place damper nut (6) over end of support extension (4). Push recoil mechanism (3) into housing (5) again until recoil mechanism stops.

b. Install damper nut (6) half-way on threads of support extension (4).

3. **INSTALL RECOIL SPRING CAP.**

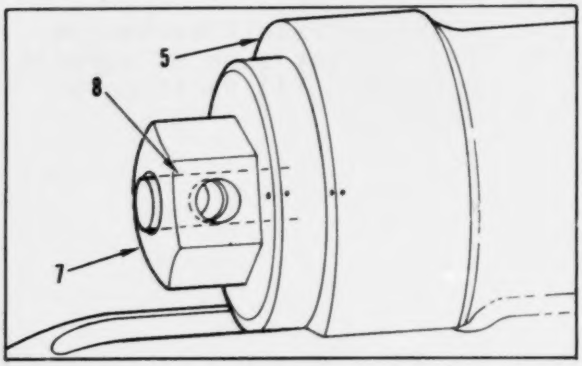


NOTE

Recoil spring cap threads and recoil housing threads must be free of lubricant.

a. Insert recoil spring cap (7) into front end of recoil housing (5).

b. Use fingers, or open end of 32-mm combination wrench. Turn cap (7) into housing (5) until pin holes in cap (7) and damper rod (8) aline.

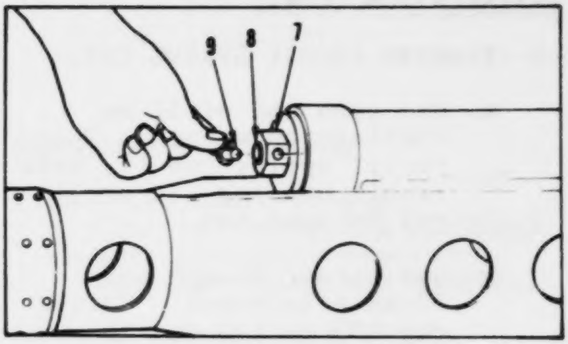


2-62. REPLACE RECOIL MECHANISM (cont) 2-62

INSTALLATION (cont)

4. **INSTALL RECOIL SPRING CAP PIN.**

   a. Insert recoil spring cap pin (9) through holes in cap (7) and damper rod (8).

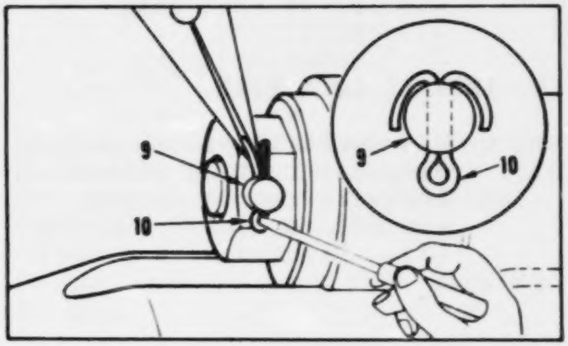


5. **INSTALL COTTER PIN.**

   a. Insert new cotter pin (10) through cap pin (9).

   b. Use flat-tip screwdriver. Insert tip of screwdriver into eye of cotter pin (10) to keep cap pin (9) from turning.

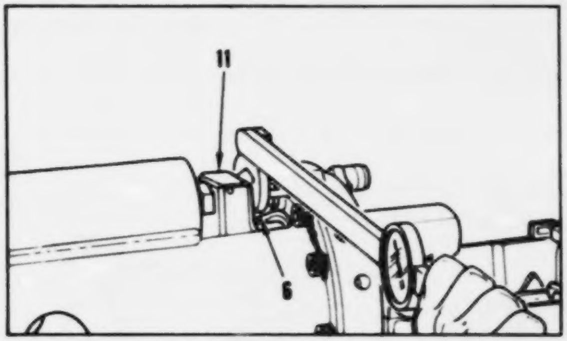
   c. Use round-nose pliers. Bend each end of cotter pin (10) around cap pin (9) as shown.



6. **TIGHTEN DAMPER NUT.**

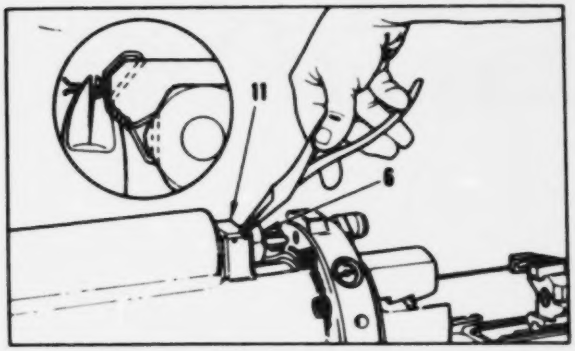
   a. Finger-tighten damper nut (6) to contact breech lug (11).

   b. Use torque wrench and 32-mm attachment. Torque damper nut (6) to 108 ft.-lb ±8 ft.-lb (1495 cmkg ±115 cmkg).



7. **INSTALL LOCK WIRE ON DAMPER NUT AND BREECH LUG.**

   a. Use duckbill pliers and diagonal-cutting pliers. Lockwire damper nut (6) to breech lug (11). Discard wire pieces.



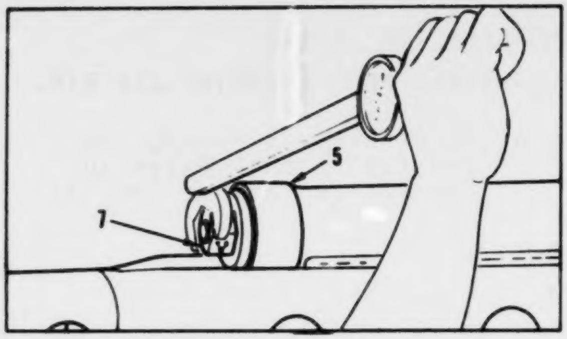
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-62. REPLACE RECOIL MECHANISM (cont) 2-62

INSTALLATION (cont)

8. **TIGHTEN RECOIL SPRING CAP.**

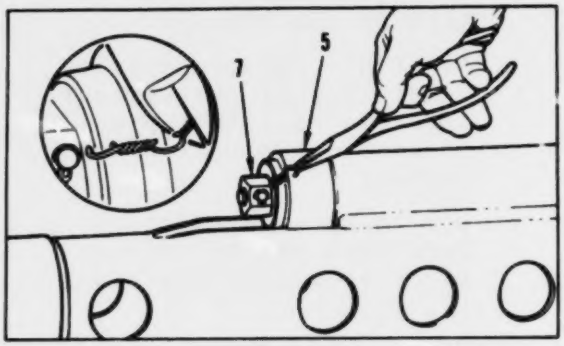
   a. Use open end of 32-mm combination wrench. Turn recoil spring cap (7) into recoil housing (5) until cap bottoms out.



   b. Use torque wrench and 32-mm attachment. Torque cap (7) to 210 in.-lb ±30 in.-lb (241 cmkg ±35 cmkg).

9. **INSTALL LOCK WIRE.**

   a. Use duckbill pliers and diagonal-cutting pliers. Lockwire recoil spring cap (7) to recoil housing (5). Discard wire pieces.



2-63. REMOVAL/INSTALL SEAR ASSEMBLY 2-63

This task covers: a. Removal b. Inspection c. Lubrication d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-10 Receiver manual cycle check
2-13 Gun will not stop in sear position
2-20 Gun fires without hangfire protection

Equipment Conditions:

2-49 Drive shaft removed (Initial Setup and REMOVAL)
2-57 Sear retractor removed (Initial Setup and REMOVAL)

General Safety Instructions

WARNING

Gun receiver is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

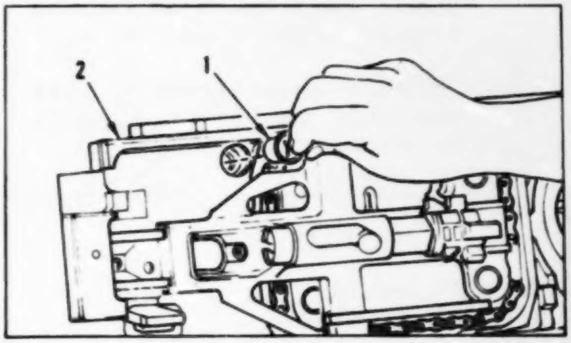
Do not wear jewelry when working on gun.

Keep your fingers away from moving parts of gun.

REMOVAL

1. **REMOVE SEAR ASSEMBLY.**

   a. Pull sear pivot sleeve (1) from receiver assembly (2).

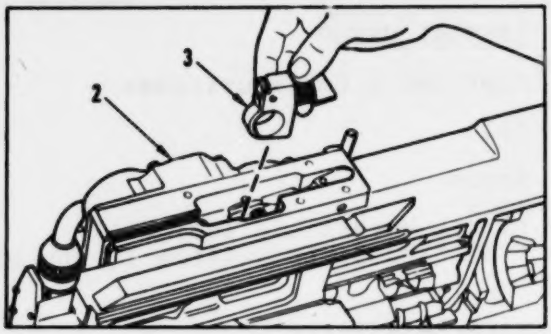


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-63. REMOVAL/INSTALL SEAR ASSEMBLY (cont) 2-63

REMOVAL (cont)

b. Lift sear assembly (3) out of receiver assembly (2).

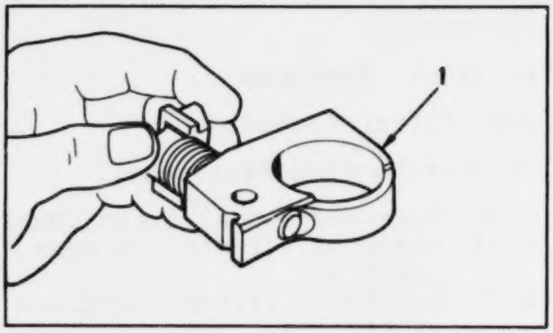


INSPECTION

1. **INSPECT SEAR ASSEMBLY.**

NOTE

Guns with serial numbers 0033 thru 1436, may have old sear assembly (part no. 12524445) installed. If a new sear assembly (part no. 12524089) is to be installed, then all of the old parts listed below must also be replaced with new parts. Old and new parts cannot be mixed together as gun may fail to operate.



a. Visually inspect sear assembly (1) for cracks, loose or broken parts.

b. Get a new sear assembly if above conditions are found. Repeat steps a and b.

c. Forward unserviceable sear assembly to Direct Support Maintenance.

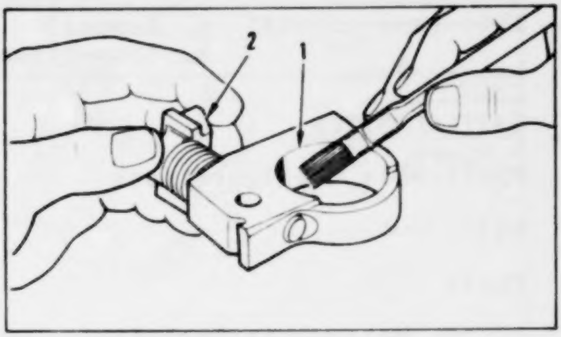
Nomenclature	Old Part No.	New Part No.
Sear Assembly	12524445	12524089
Aft Chain Guide	12524347	12524085
Chain Sear Cover Assembly	12524375	12524107
Chain Sear Catch Assembly	12524418	12524070
Sear Solenoid Plunger Assembly	None	12524419-2
Sear Push Rod	12524432	12524165
Sear Release Link	12524439	12524166

2-63. REMOVE/INSTALL SEAR ASSEMBLY (cont) 2-63

LUBRICATION

1. **LUBRICATE SEAR ASSEMBLY.**

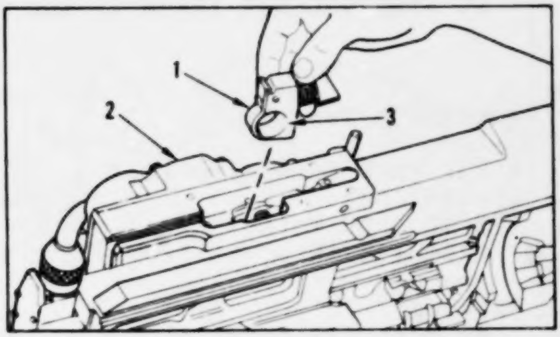
   a. Use acid brush. Apply light coat of grease (D2) to pivot hole (1) and sear (2).



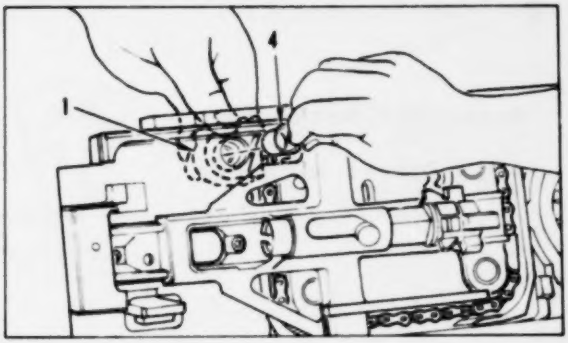
INSTALLATION

1. **INSTALL SEAR ASSEMBLY.**

   a. Place sear assembly (1) in receiver assembly (2) with pivot hole (3) down as shown.



   b. Hold sear assembly (1) in position; install sear pivot sleeve (4). Press in narrow end of sear pivot sleeve (4) until seated.



NOTE

FOLLOW-ON MAINTENANCE: Install sear retractor assembly (para 2-57, Initial Setup, INSTALLATION, and follow-on maintenance). Install drive shaft (para 2-49, Initial Setup, INSTALLATION, and follow-on maintenance).

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-64. REPLACE 1.5 HP - DC MOTOR 2-64

This task covers: a. Removal c. Lubrication
b. Inspection d. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

0.032-Inch Lock Wire (D1)
Grease (D2)
1.5 HP - DC Motor
12524473 (Fig. 6, Item 73, App C)
Packing
MS 9241-133 (Fig. 6, Item 74, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References:

2-8 Electrical checkout
2-10 Receiver manual cycle check

General Safety Instructions

WARNING

Gun receiver assembly is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

Wear eye protection when cutting lock wire. You can be blinded if wire hits you in the eye. Get medical help at once if wire gets in your eye.

Do not wear jewelry when working on the gun.

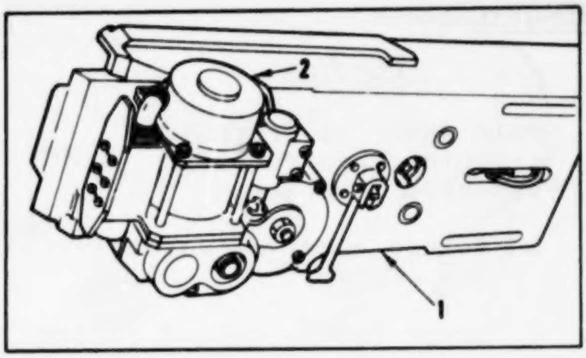
Keep your fingers away from moving parts of gun.

2-64. REPLACE 1.5 HP - DC MOTOR (cont) 2-64

REMOVAL

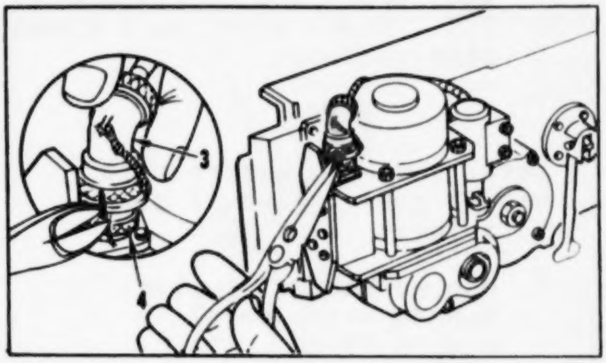
1. **PLACE RECEIVER ASSEMBLY ON A CLEAN, FLAT SURFACE.**

   a. Position receiver assembly (1) on side with motor (2) up as shown.



2. **REMOVE LOCK WIRE FROM ELECTRICAL CONNECTOR.**

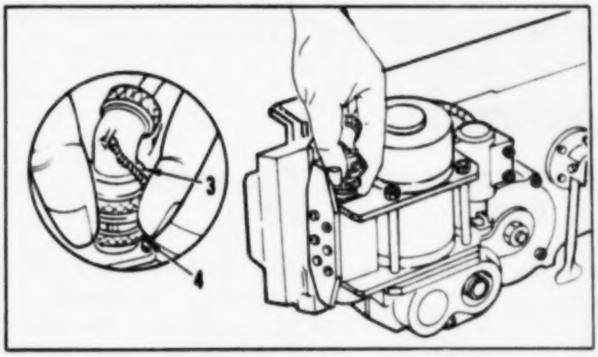
   a. Use diagonal-cutting pliers and duckbill pliers. Remove lock wire from connector (3) and connector lock ring (4).



3. **DISCONNECT ELECTRICAL CONNECTOR.**

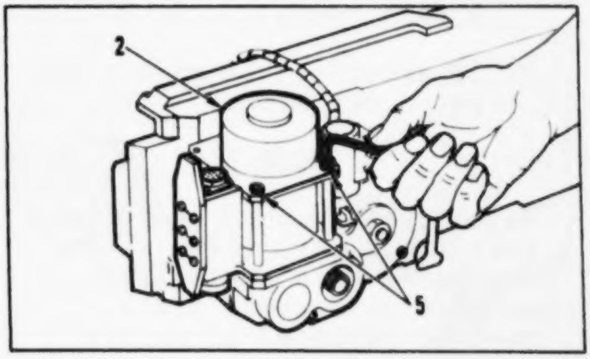
   a. Turn lock ring (4) counterclockwise until free.

   b. Pull connector (3) straight up until disconnected from motor connector.



4. **REMOVE MOTOR.**

   a. Use 6-mm hex key. Remove four socket head cap screws (5) from motor (2).



2-64. REPLACE 1.5 HP - DC MOTOR (cont) 2-64

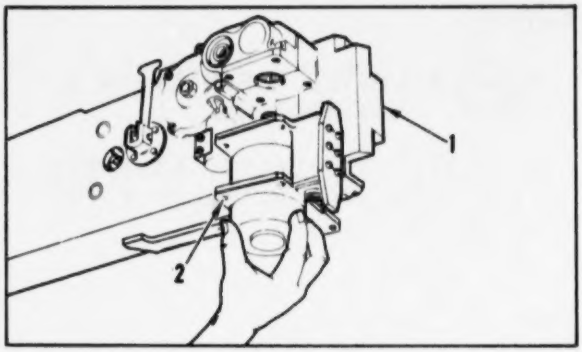
REMOVAL (cont)

CAUTION

Hold motor to prevent dropping when receiver assembly is moved.

b. Rotate receiver assembly (1) 180 degrees.

c. Lower motor (2) and rotate away from receiver assembly (1). Place motor on a clean flat surface.

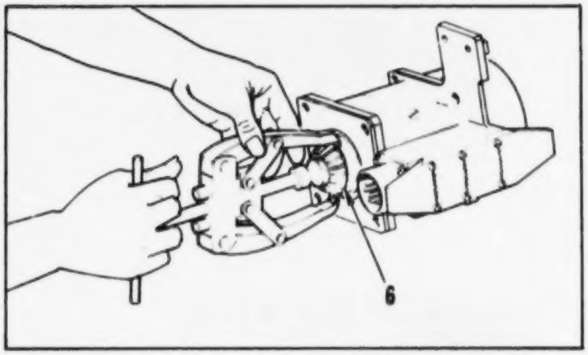


NOTE

Bevel gear may not require use of gear puller if gear is a loose fit.

d. Use mechanical puller. Remove motor bevel pinion (6).

e. Remove and discard packing (7).

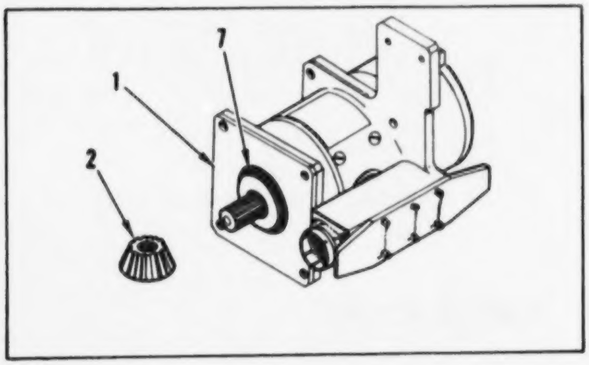


INSPECTION

1. **INSPECT MOTOR AND BEVEL GEAR.**

a. Visually check motor (1) for cracks, dents, broken or bent parts. Check bevel gear (2) for cracked or broken teeth.

b. If motor (1) is defective, get a new motor.



NOTE

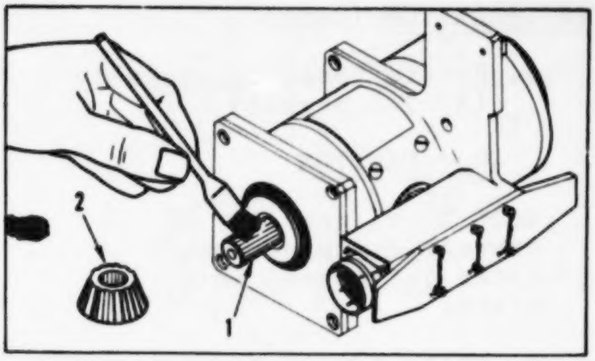
Bevel gear (motor) and bevel gear (receiver) (para 2-67) are parts of a serialized, matched set. Both gears must be replaced if either part is defective.

2-64. REPLACE 1.5 HP - DC MOTOR (cont) 2-64

LUBRICATION

1. **LUBRICATE MOTOR SHAFT SPLINES AND BEVEL GEAR.**

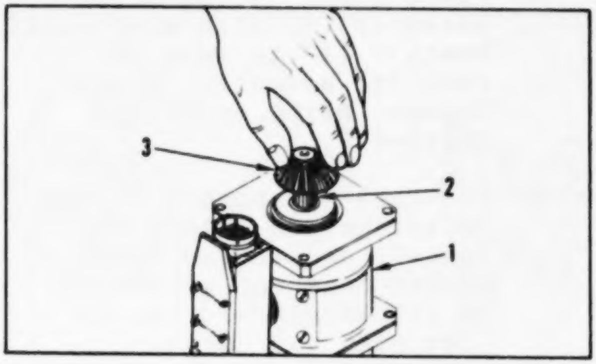
   a. Apply light coat of grease (D2) to motor shaft splines (1) and to bevel gear (2).



INSTALLATION

1. **INSTALL MOTOR.**

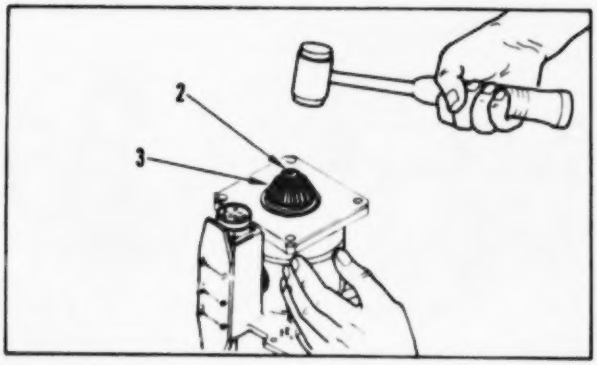
   a. Place motor (1) so motor shaft splines (2) are on top as shown. Mate splines of bevel gear (3) with motor shaft splines (2).



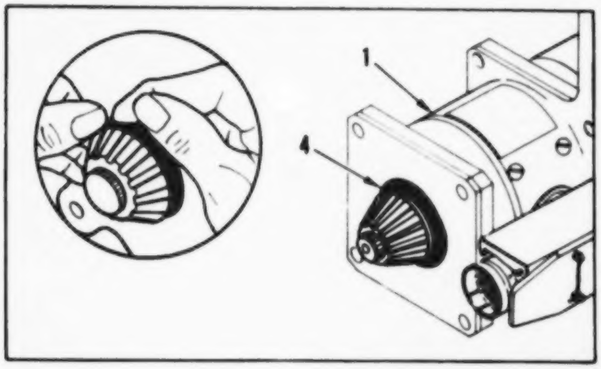
NOTE

If bevel gear is a loose fit on motor shaft splines, hammer is not required.

   b. Use plastic-face hammer. Gently tap bevel gear (3) on motor shaft splines (2) until bevel gear (3) is seated.

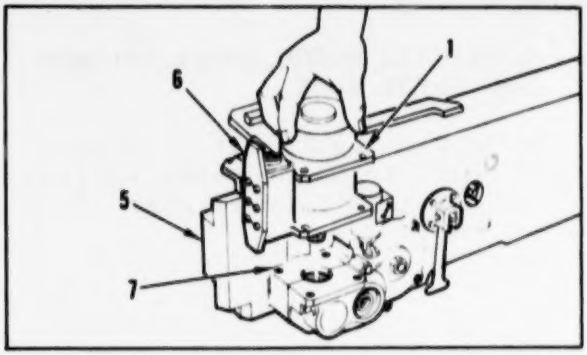


   c. Install new packing (4) on motor (1).



2-64. REPLACE 1.5 HP - DC MOTOR (cont) 2-64

INSTALLATION (cont)

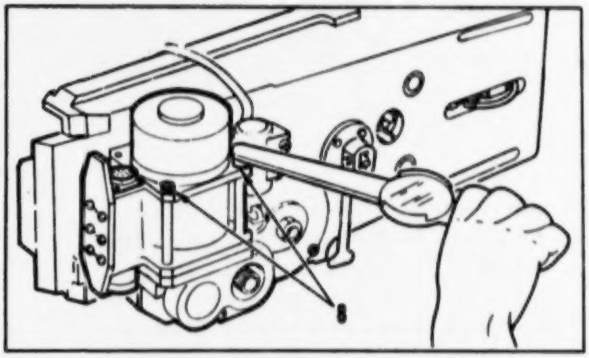


d. Rotate receiver assembly (5) 180 degrees.

CAUTION

Hold bevel gear to prevent dropping when motor is lowered into place.

e. Place motor (1) on receiver assembly (5) with electrical bracket (6) to rear of receiver assembly (5) as shown. Aline mounting holes (7).



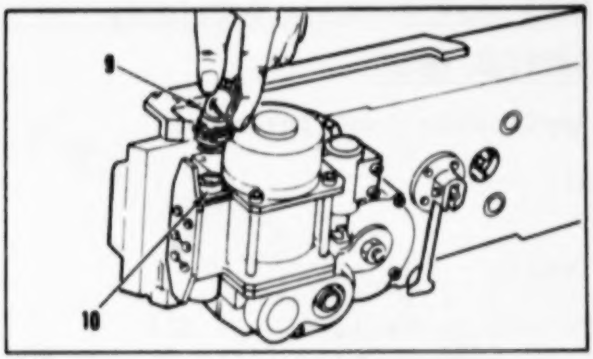
f. Use torque wrench and 6-mm socket wrench attachment. Install and torque four socket head cap screws (8) to 160 in.-lb ±10 in.-lb (184 cmkg ±12 cmkg).

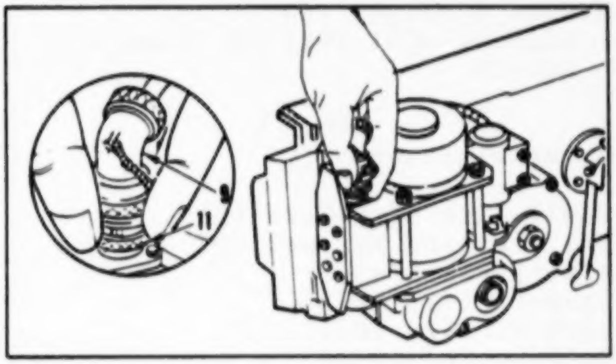
2-64. REPLACE 1.5 HP - DC MOTOR (cont) 2-64

INSTALLATION (cont)

2. **CONNECT ELECTRICAL CONNECTOR.**

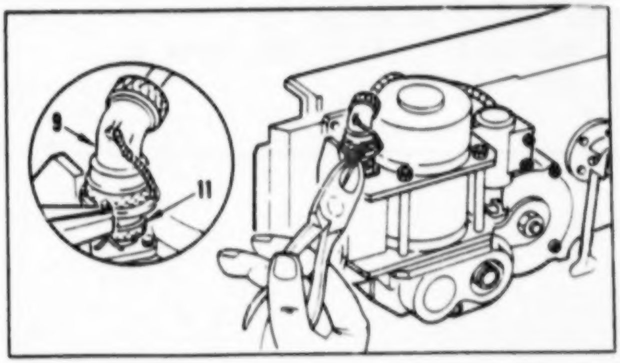
   a. Mate electrical connector (9) with motor connector (10). Turn lock ring (11) clockwise until seated.





3. **INSTALL LOCK WIRE ON ELECTRICAL CONNECTOR.**

   a. Use round-nose pliers and diagonal-cutting pliers. Lockwire electrical connector (9) to connector lock ring (11). Discard wire pieces.



MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-65. SERVICE RECOIL MECHANISM 2-65

This task covers: Servicing

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
  SC 5180-95CLB19 (Item 1, App B)
Headed Straight Pin
  MS20392-4C41 (Fig. 6, Item 4, App C)

Materials/Parts

0.032-Inch Lock Wire (D1)
Dry Cleaning Solvent (D3)
Wiping Rag (D4)
Damper Fluid (D19)
Lock Pin (2) (D21)
Welding Rod (D22)
Preformed Packing
  NAS1612-2 (Fig. 10, Item 2, App C)

Personnel Required

45T Turret Mechanic

Troubleshooting References

2-18 Excessive recoil or inadequate dampening

Equipment Conditions

2-62 Recoil mechanism removed

General Safety Instructions

WARNING

Do not wear jewelry when working on the gun.

Solvent is flammable and toxic. Use in well-ventilated area away from open flames.

2-65. SERVICE RECOIL MECHANISM (cont) 2-65

1. CLEAN RECOIL MECHANISM.

WARNING

Solvent is flammable and toxic. Use in well-ventilated area away from open flames. If solvent comes in contact with eyes or skin, flush with water. If irritation occurs, get medical help.

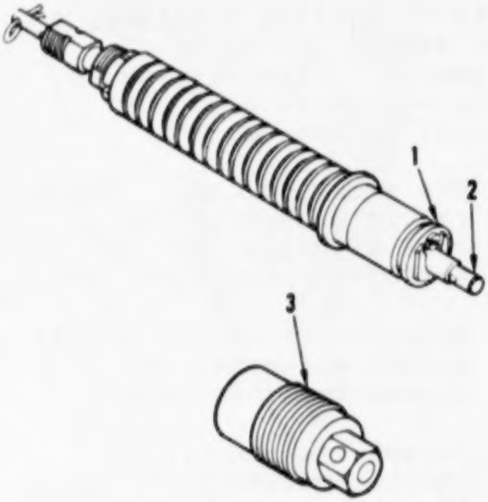
CAUTION

Avoid damper fluid contamination. Do not get grease or solvent on damper rod, piston rod, end of support extension, or filler hole area on damper housing cap.

a. Use clean, dry rag (D4) dampened with dry cleaning solvent (D3). Wipe all grease from damper housing cap top (1).

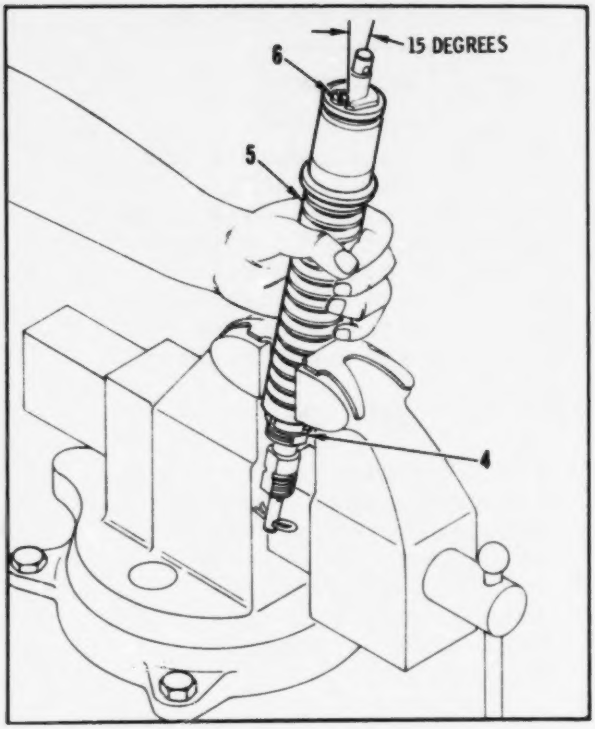
b. Use a new clean, dry rag (D4) lightly moistened with dry cleaning solvent (D3). Carefully wipe and clean damper rod (2).

c. Immerse removed recoil spring cap (3) in dry cleaning solvent. Wash all damper fluid (D3) from inside and outside of cap.



2-65. SERVICE RECOIL MECHANISM (cont) 2-65

2. **POSITION RECOIL MECHANISM.**



CAUTION

Excess clamping pressure may damage spring set segments. Tighten vise only enough to hold recoil mechanism.

a. Use vise jaw caps. Place recoil mechanism (4) in vise with jaw caps on spring set segments (5).

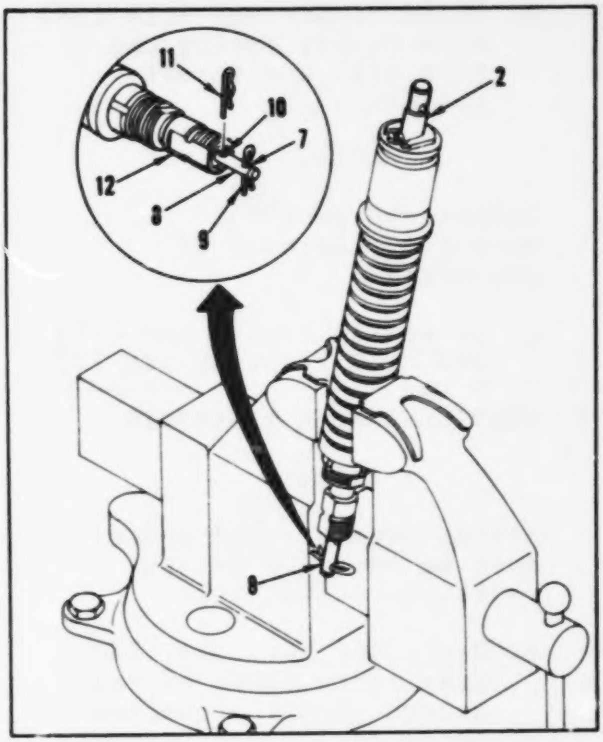
b. Grip recoil mechanism (4) midway on spring set segments (5) as shown.

c. Loosen vise and tilt recoil mechanism (4) about 15 degrees, with filler plug (6) at highest point.

d. Tighten vise carefully.

2-65. SERVICE RECOIL MECHANISM (cont) 2-65

3. **SET RESERVOIR PISTON ROD POSITION.**



CAUTION

Scratches on piston rod will damage internal damper seal. Do not use tools on piston rod.

NOTE

If first hole in piston rod can be seen, skip step a.

a. Press damper rod (2) until first hole (7) in piston rod (8) can be seen.

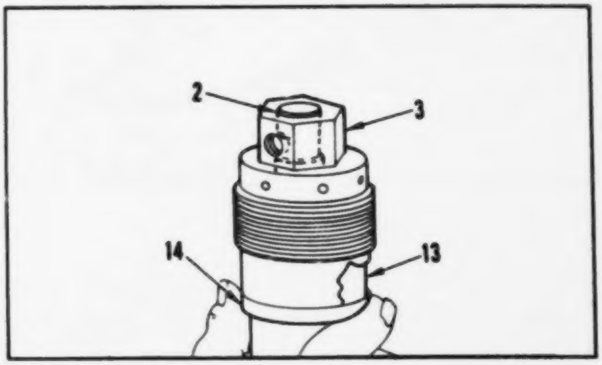
b. Insert a lock pin (9) in first piston rod hole (7).

c Pull on pin (9) and slide out piston rod (8) until second hole (10) can be seen.

d. Insert another lock pin (11) in second hole (10).

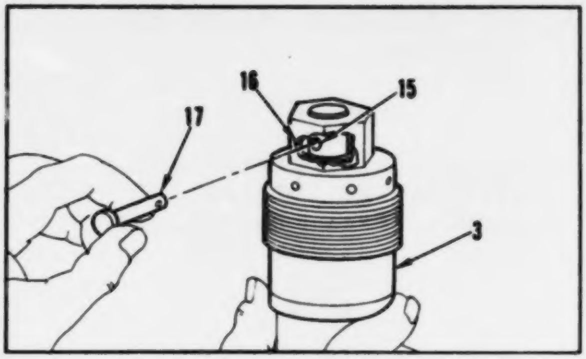
e. Release tension on first pin (9) until second pin (11) contacts support extension (12).

4. **SET DAMPER ROD POSITION.**



a. Slide recoil spring cap (3) over damper housing cap (13) and damper rod (2). Seat cap (3) on recoil spring spacer (14).

2-65. SERVICE RECOIL MECHANISM (cont) 2-65



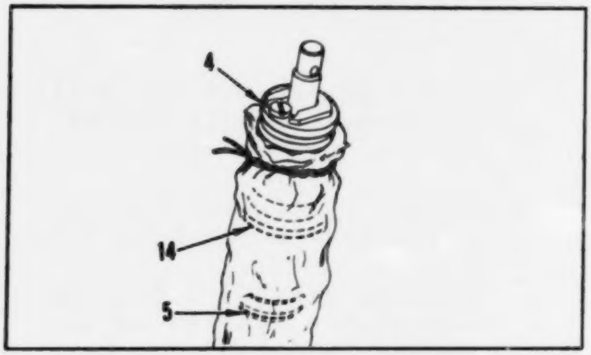
b. Aline damper rod hole (15) with recoil spring cap hole (16) and insert pin (17).

NOTE

Damper rod must not move for remainder of procedure.

c. Carefully remove pin (17) and recoil spring cap (3).

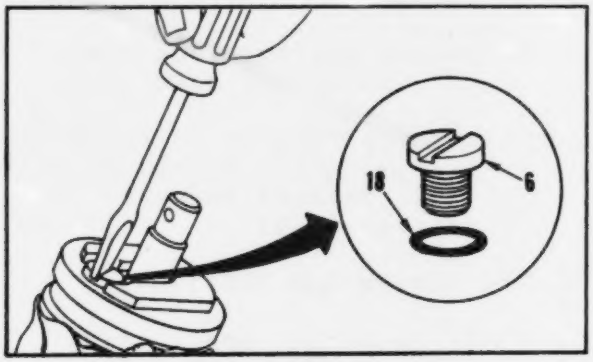
5. **SERVICE DAMPER RESERVOIR.**



NOTE

Spring segments and spacer must be kept dry during reservoir servicing.

a. Use clean, dry rag (D4). Wrap three turns of rag around recoil mechanism (4) above spring set segments (5) and spacer (14). Secure rag with lock wire (D1).



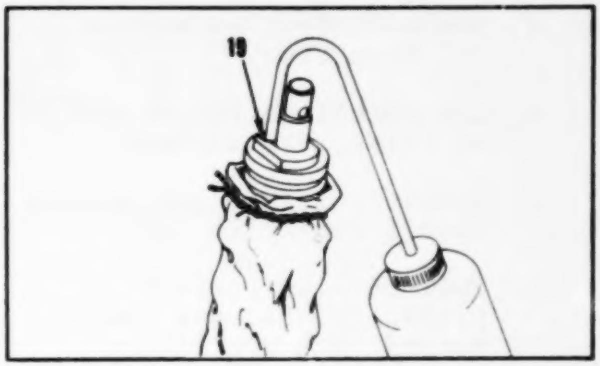
b. Use flat-tip screwdriver. Slowly remove filler plug (6).

c. Remove and discard packing (18).

2-65. SERVICE RECOIL MECHANISM (cont) 2-65

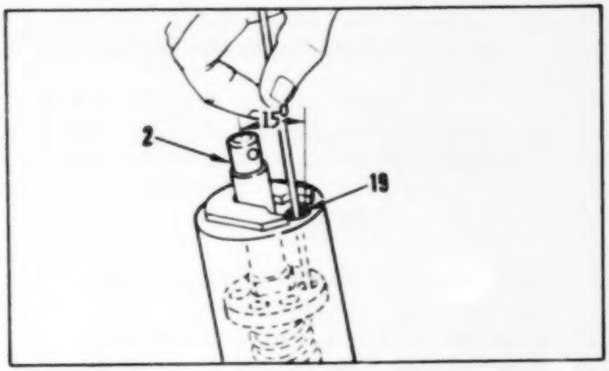
d. Use plastic bottom-syphon bottle filled with clean damper fluid (D19). Slowly fill damper reservoir until fluid is at top lower edge of filler hole (19).

e. Check that damper reservoir is full, and no air bubbles can be seen in filler hole (19).



f. Insert 1/8 in. x 12 in. (3mm x 300mm) welding rod (D22) into filler hole (19) and through a flange hole in damper rod (2).

g. Push down on 1/8 in. x 12 in. (3mm x 300mm) welding rod (D22) one-half inch. Hold for thirty seconds to allow fluid to flow into lower reservoir.

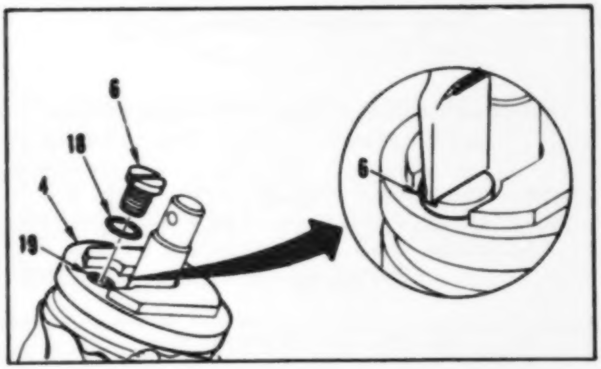


h. Repeat steps d thru g until damper reservoir is full of fluid.

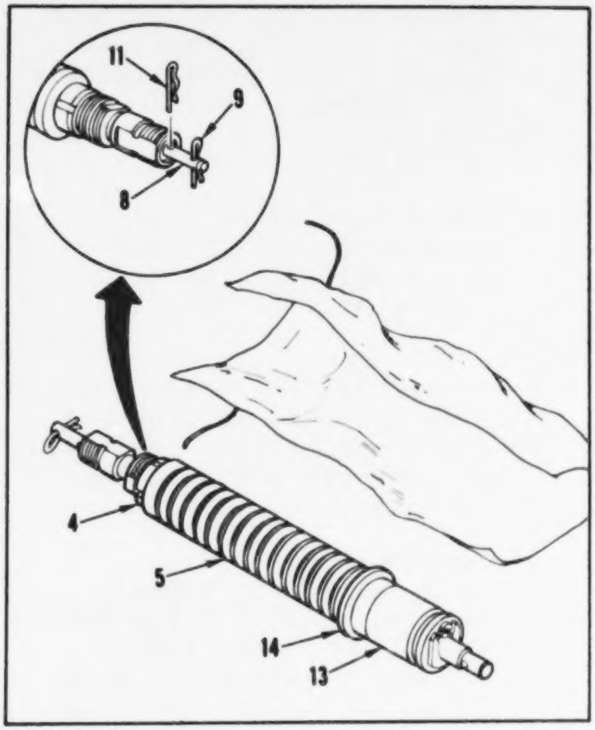
i. Use clean, dry rag (D4). Wipe off top of recoil mechanism (4) and around filler hole (19).

j. Use flat-tip screwdriver. Install filler plug (6) with new packing (18). Tighten filler plug (6).

k. Use new clean, dry rag (D4). Wipe off all traces of damper fluid from top of recoil mechanism (4) and around filler plug (6).



2-65. SERVICE RECOIL MECHANISM (cont) 2-65



l. Remove recoil mechanism (4) from vise.

m. Lay recoil mechanism (4) on clean, dry surface.

n. Remove rag from top of recoil mechanism (4).

o. Pull out on reservoir piston rod (8) and remove second lock pin (11).

p. Slowly release tension on piston rod (8) until it stops.

q. Remove remaining lock pin (9).

CAUTION

Any damper fluid remaining on spring segments or spacer will affect damping operation, causing possible gun damage.

r. Use clean, dry rag. Wipe all traces of damper fluid from damper housing cap (13).

s. Check spring set segments (5) and spacer (14) for evidence of damper fluid. If needed, use new clean, dry rag to wipe off any remaining fluid.

NOTE

FOLLOW-ON MAINTENANCE: Lubricate recoil mechanism (para 2-62, LUBRICATION). Install recoil mechanism (para 2-62, INSTALLATION, and follow-on maintenance).

2-66. REPAIR CLUTCH ASSEMBLY 2-66

This task covers:

a. Removal
b. Disassembly
c. Cleaning
d. Inspection/Repair
e. Lubrication
f. Assembly
g. Test
h. Installation

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
SC 5180-95CLB19 (Item 1, App B)

Materials/Parts

Grease (D2)
Dry Cleaning Solvent (D3)
Wiping Rag (D4)

For double spring clutch assembly, order the following parts:
Clutch Spring (Inner)
12524147-1 (Fig. 6, Item 63, App C)
Clutch Spring (Outer)
12524147-2 (Fig. 6, Item 64, App C)
Clutch Rollers
12524313 (Fig. 6, Item 66, App C)

For single spring clutch assembly, order the following parts:
Clutch Spring
12524311 (Fig. 6, Item 69, App C)
Clutch Roller
12524313 (Fig. 6, Item 71, App C)

Personnel Required

45T Turret Mechanic

Equipment Conditions:

2-64	Drive motor removed
2-49	Drive shaft removed
2-58	Track and bolt assembly removed

General Safety Instructions

WARNING

Do not wear jewelry when working on gun.

Gun receiver is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

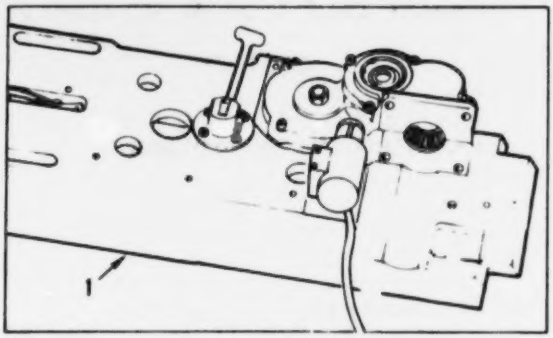
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-66. REPAIR CLUTCH ASSEMBLY (cont) 2-66

REMOVAL

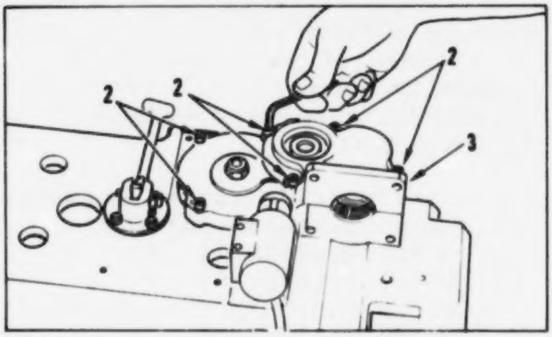
1. **POSITION RECEIVER ASSEMBLY.**

   a. Place receiver assembly (1) underside up as shown, on clean, flat surface.

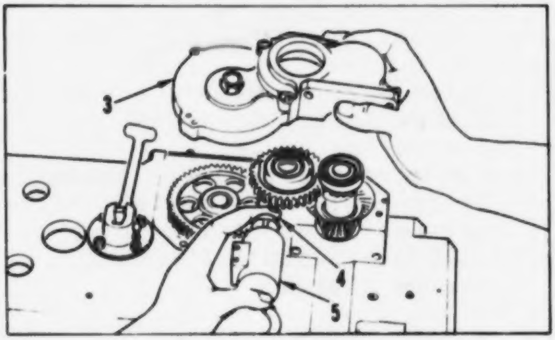


2. **REMOVE MOTOR GEARBOX COVER.**

   a. Use 5mm hex key. Remove six socket head cap screws (2) from motor gearbox cover (3).



   b. Press release link (4) on solenoid (5). At the same time, lift motor gear box cover (3) from receiver assembly.



NOTE

Tap motor gearbox cover on a wood surface to remove any annular ball bearings that might stick to cover.

2-66. REPAIR CLUTCH ASSEMBLY 2-66

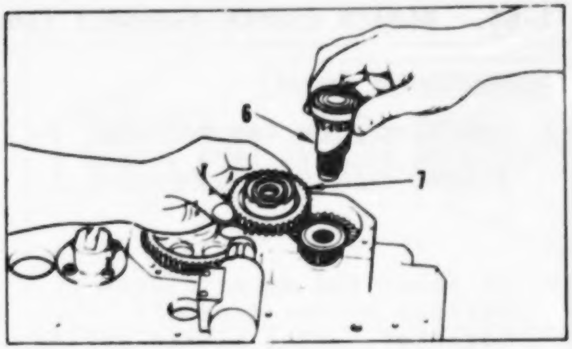
REMOVAL (cont)

3. **REMOVE CLUTCH ASSEMBLY.**

CAUTION

Clutch assembly may fall apart when pulled out of the receiver.

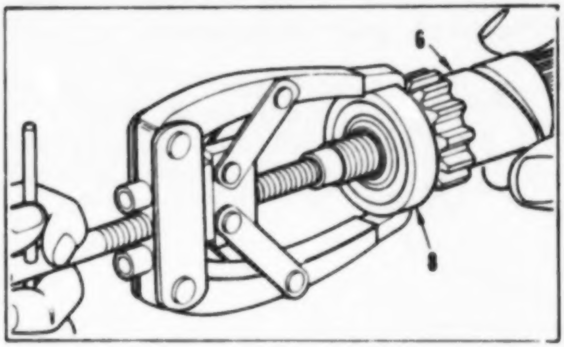
a. Pull clutch assembly (6) and cluster gear (7) out of receiver assembly at the same time.



NOTE

If annular ball bearing for clutch assembly remained in gearbox cover, step b will not be required.

b. Use outside puller. Pull annular ball bearing (8) off clutch assembly (6).



DISASSEMBLY

NOTE

There will be either a single clutch spring or a double clutch spring installed on the clutch assembly. For disassembly instructions refer to step 1 for double spring clutch or step 3 for single spring clutch.

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-66. REPAIR CLUTCH ASSEMBLY (cont) 2-66

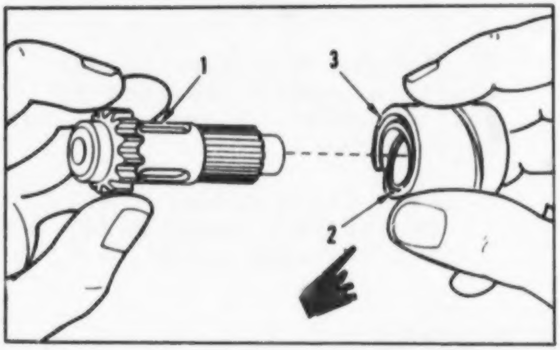
DISASSEMBLY (cont)

1. **REMOVE CLUTCH SPRINGS AND CLUTCH ROLLERS FROM DOUBLE SPRING CLUTCH ASSEMBLY.**

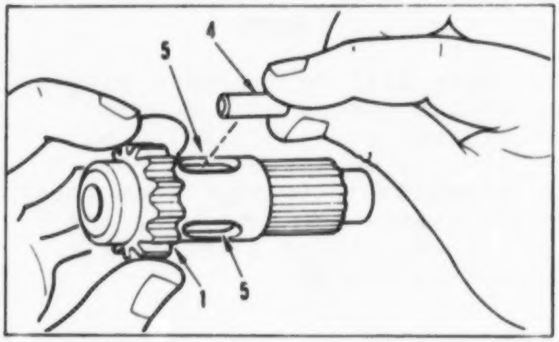
NOTE

If inner and outer clutch springs do not come off together, inner clutch spring will have to be removed from clutch gear separately.

a. Hold clutch gear (1). Pull and twist off inner and outer clutch springs (2) and (3). Discard clutch springs (2) and (3).

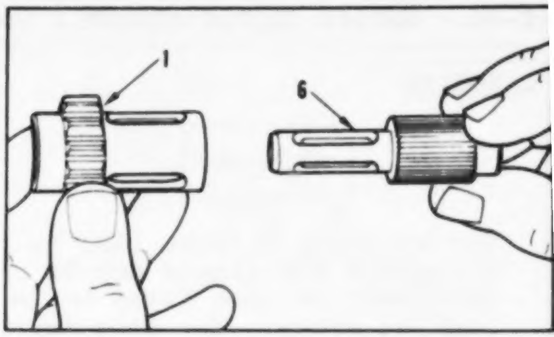


b. Remove three clutch rollers (4) from slots (5) in clutch gear (1). Discard clutch rollers (4).



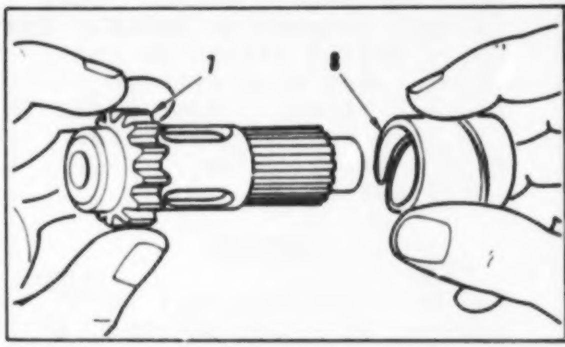
2-66. REPAIR CLUTCH ASSEMBLY 2-66

DISASSEMBLY (cont)



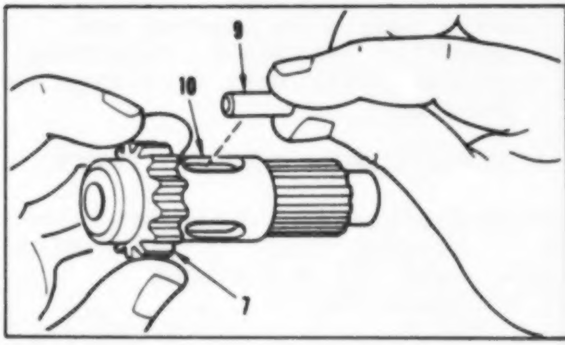
2. **REMOVE CLUTCH SHAFT.**

   a. Pull clutch shaft (6) out of clutch gear (1).

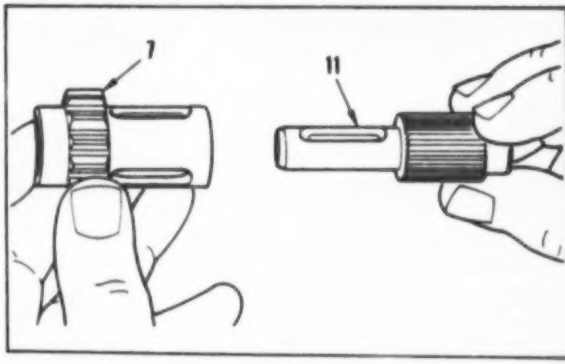


3. **REMOVE CLUTCH SPRING AND CLUTCH ROLLER FROM SINGLE SPRING CLUTCH ASSEMBLY.**

   a. Hold clutch gear (7). Pull and twist off clutch spring (8). Discard clutch spring (8).



   b. Remove clutch roller (9) from slot (10) in clutch gear (7). Discard clutch roller (9).



4. **REMOVE CLUTCH SHAFT.**

   a. Pull clutch shaft (11) out of clutch gear (7).

MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-66. REPAIR CLUTCH ASSEMBLY (cont) 2-66

CLEANING

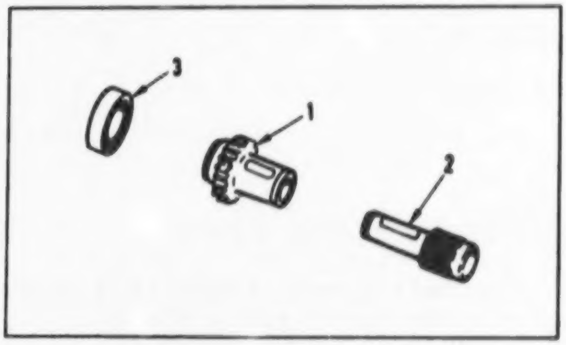
WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in smoking areas. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation or inflammation.

CAUTION

Do not clean bearings in solvent or allow solvent to run into bearings. Solvent will remain in bearing and dissolve lubricant, resulting in excessive wear or damage to bearing.

1. **CLEAN CLUTCH ASSEMBLY PARTS.**
   a. Use cleaning brush and solvent (D3). Clean clutch gear (1) and clutch shaft (2).
   b. Wipe bearing (3) with clean, dry rag (D4).



2-66. REPAIR CLUTCH ASSEMBLY 2-66

INSPECTION/REPAIR

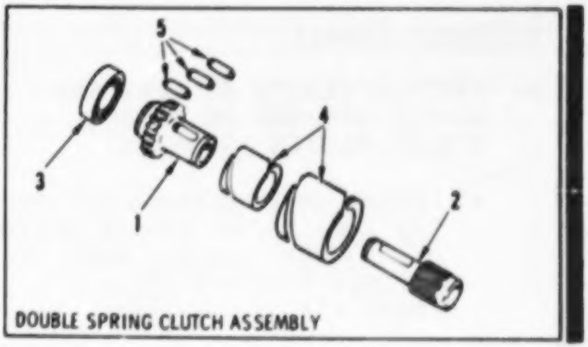
1. **INSPECT CLUTCH ASSEMBLY PARTS.**

   a. Visually inspect clutch gear (1) and clutch shaft (2) for cracks, broken shaft splines and gear teeth.

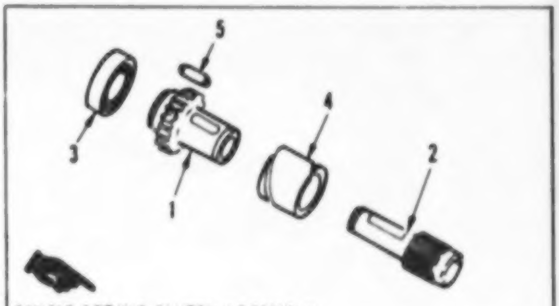
   b. Check movement of bearing (3) for binding or roughness.

   c. Visually inspect new clutch spring(s) (4) and new clutch roller(s) (5) for cracks, bends and galls.

   d. Get a new part if any of the above defects are found. Repeat step 1 for any replacement parts.



DOUBLE SPRING CLUTCH ASSEMBLY



SINGLE SPRING CLUTCH ASSEMBLY

LUBRICATION

1. **LUBRICATE CLUTCH ASSEMBLY PARTS.**

a. Use acid brush. Apply a light coat of grease (D2) to clutch assembly parts (1, 2, 4, 5) and ball bearing (3).

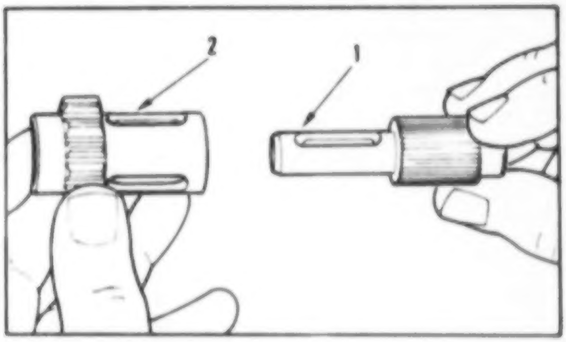
ASSEMBLY

1. **ASSEMBLE CLUTCH ASSEMBLY**

   a. Insert clutch shaft (1) into clutch gear (2).

NOTE

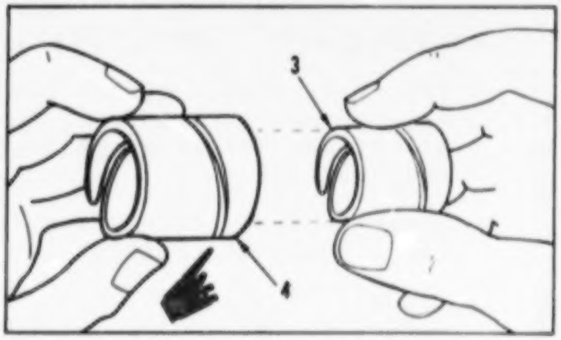
The clutch assembly will be assembled with either a single clutch spring or a double clutch spring. For assembly instructions, refer to step 2 for double spring clutch or step 3 for single spring clutch.



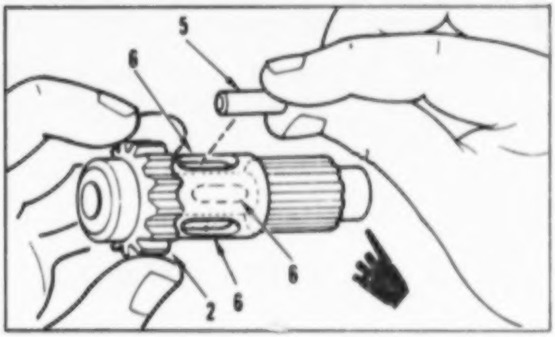
2-66. REPAIR CLUTCH ASSEMBLY 2-66

ASSEMBLY (cont)

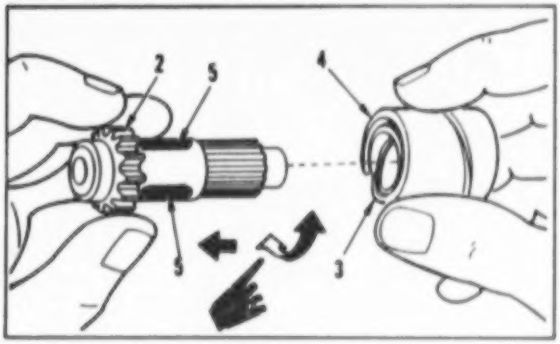
2. INSTALL CLUTCH ROLLERS AND CLUTCH SPRINGS ON DOUBLE SPRING CLUTCH ASSEMBLY.



a. Insert inner clutch spring (3) into outer clutch spring (4). Make certain ends of springs (3) and (4) are flush with each other.



b. Place three clutch rollers (5) into slots (6) in clutch gear (2).



c. Position assembled inner and outer clutch springs (3) and (4) over clutch rollers (5). Slide clutch springs (3) and (4) along clutch rollers (5) until seated firmly against clutch gear (2).

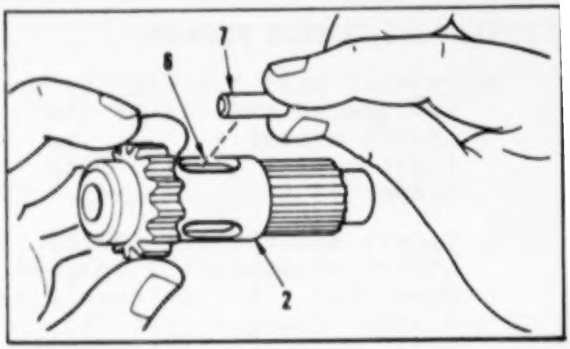
MAINTENANCE OF RECEIVER ASSEMBLY (cont)

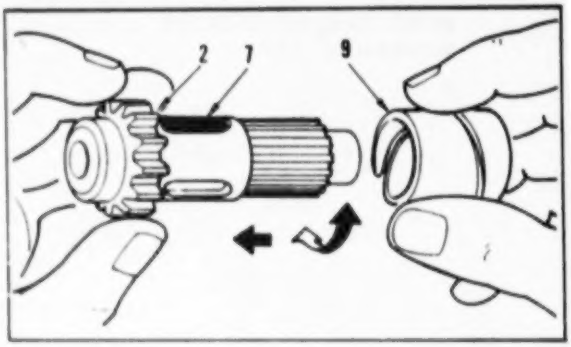
2-66. REPAIR CLUTCH ASSEMBLY (cont) 2-66

3. **INSTALL CLUTCH ROLLERS AND CLUTCH SPRING ON SINGLE SPRING CLUTCH ASSEMBLY.**

   a. Place clutch roller (7) into slot (8) in clutch gear (2).

   b. Position clutch spring (9) over clutch roller (7). Slide clutch spring (9) along clutch roller (7) until seated firmly against end of clutch gear (2).





TEST

1. **TEST CLUTCH ASSEMBLY SLIPPAGE TORQUE.**

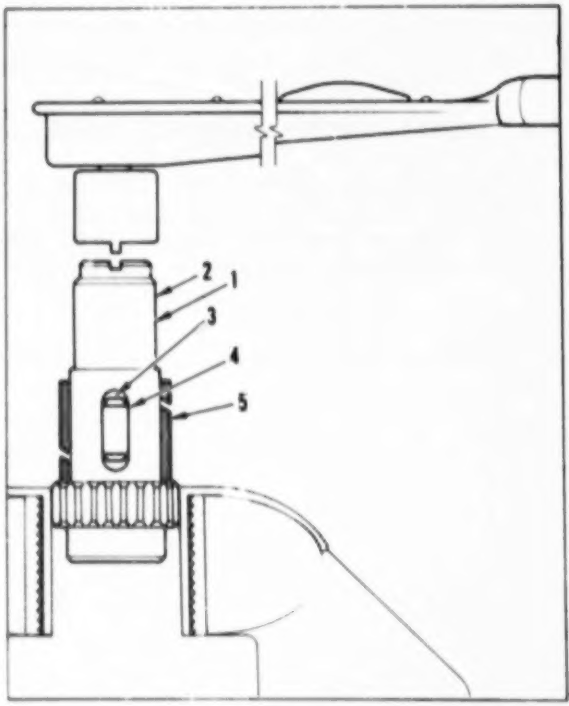
NOTE

This procedure applies to single and double clutch spring clutch assemblies. Single spring clutch assembly is shown illustrated at right.

   a. Use vise jaw caps. Place clutch assembly (1) in vise as shown.

   b. Use torque wrench and screwdriver bit. Torque the clutch shaft (2) in a clockwise direction. Record the highest torque value (slippage torque) at which the roller(s) (3) move out of their slot(s) (4) and allow the clutch shaft (2) to rotate (slip).

   c. Replace clutch roller(s) (3) and clutch spring(s) (5) if slippage torque is not 600 in.-lb ±75 in.-lb (691±86 cmkg) for double spring clutch or 275 in.-lb ±28 in-lb (317 ±32 cmkg) for single spring clutch.

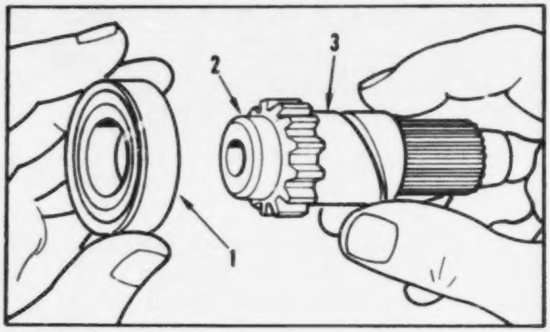


2-66. REPAIR CLUTCH ASSEMBLY 2-66

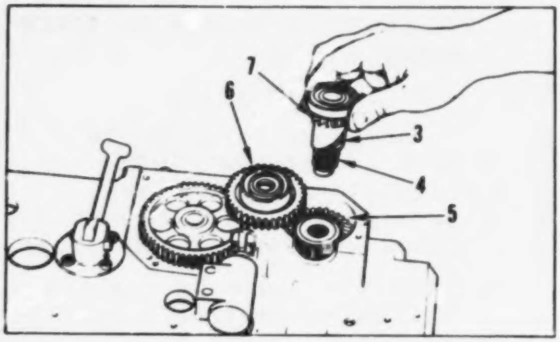
INSTALLATION

1. **INSTALL CLUTCH ASSEMBLY.**

   a. Install ball bearing (1) on the geared end (2) of the clutch assembly (3). Tap lightly with plastic-face hammer if necessary.

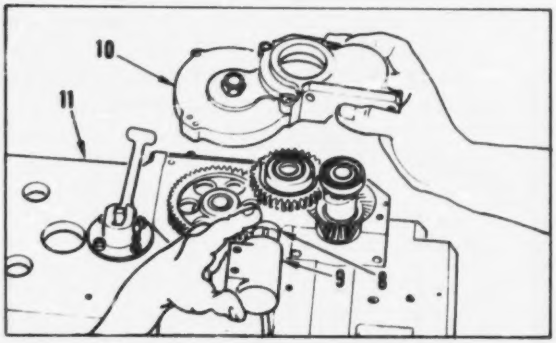


   b. Insert splined end (4) of clutch assembly (3) in gear-bevel (5). At the same time, install cluster gear (6) until it mates with clutch gear (7) of clutch assembly (3).



2. **INSTALL MOTOR GEARBOX COVER.**

   a. Push release link (8) on solenoid (9) and install motor gearbox cover (10) on receiver assembly (11).

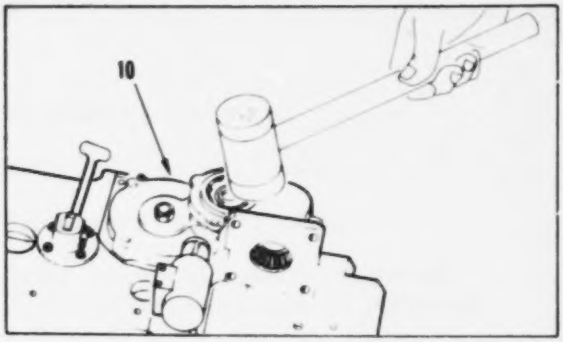


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-66. REPAIR CLUTCH ASSEMBLY (cont) 2-66

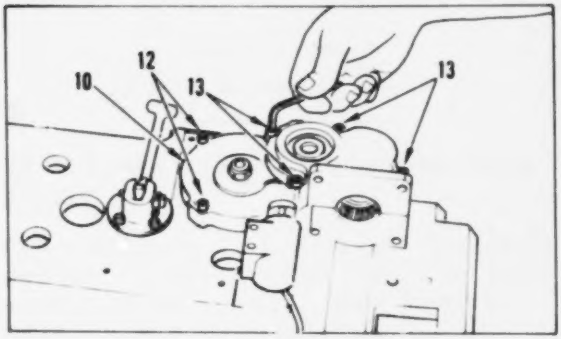
INSTALLATION (cont)

b. Use plastic-face hammer. Tap cover (10) until seated.

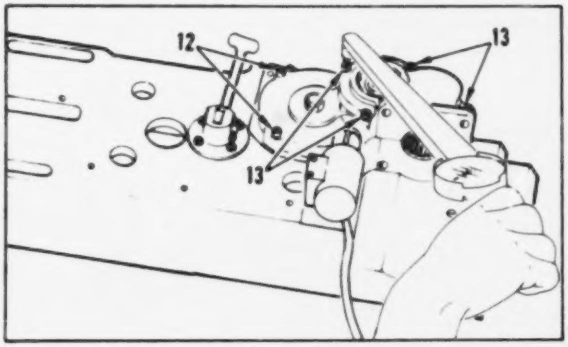


c. Install the two short socket head cap screws (12) into the large lower part of the motor gearbox cover (10).

d. Install the four remaining long socket head cap screws (13) in the remaining four holes of the motor gearbox cover (10).



e. Use 5mm attachment and torque wrench. Torque socket head cap screws (12, 13) to 80 in.-lb ±5.0 in.-lb (92 cmkg ±6.0 cmkg).



NOTE

FOLLOW-ON MAINTENANCE: Install track and bolt assembly (para 2-58). Install drive shaft (para 2-49). Install drive motor (para 2-64). Perform receiver manual cycle check (para 2-9).

2-67. REPAIR RECEIVER ASSEMBLY GEARS 2-67

This task covers:
a. Disassembly
b. Cleaning
c. Inspection/Repair
d. Lubrication
e. Assembly

INITIAL SETUP

Applicable Configurations

All

Tools

Turret Mechanic's Tool Kit
  SC 5180-95CLB19 (Item 1, App B)
12MM Combination Wrench
  OEXM120 (Item 23, App B)
19MM Combination Wrench
  OEXM190 (Item 24, App B)

Materials/Parts

Grease (D2)
Dry Cleaning Solvent (D3)
Penetrating Oil (D20)
Hex Self-Locking Nut
  12524617-3 (Fig. 6,
  Item 80, App C)

Personnel Required

45T Turret Mechanic

Equipment Conditions:

2-63 Sear assembly removed
2-66 Clutch assembly removed

General Safety Instructions

WARNING

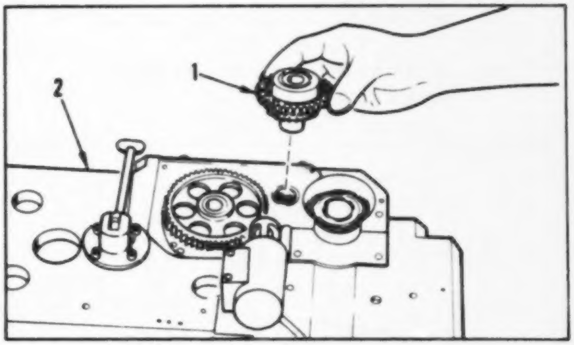
Do not wear jewelry when working on gun.

Gun receiver is too heavy for one person to lift. Get help to lift or carry receiver. Get medical help if you are injured.

DISASSEMBLY

1. **REMOVE CLUSTER GEAR ASSEMBLY.**

   a. Lift cluster gear (1) out of receiver assembly (2) if gear has not already been removed.

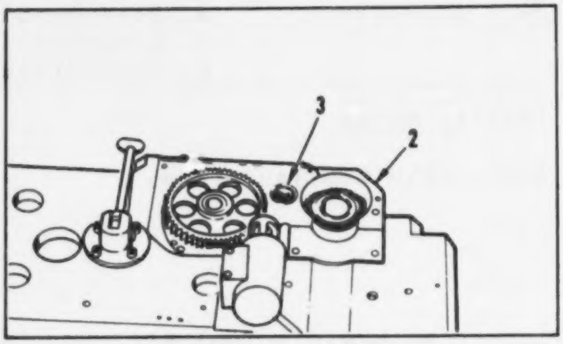


MAINTENANCE OF RECEIVER ASSEMBLY (cont)

2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

DISASSEMBLY (cont)

b. Inspect roller needle bearing (3) inside receiver assembly (2) for any breaks, cracks, or bends. Check movement of bearing for binding. If above conditions exist, complete steps c thru e.

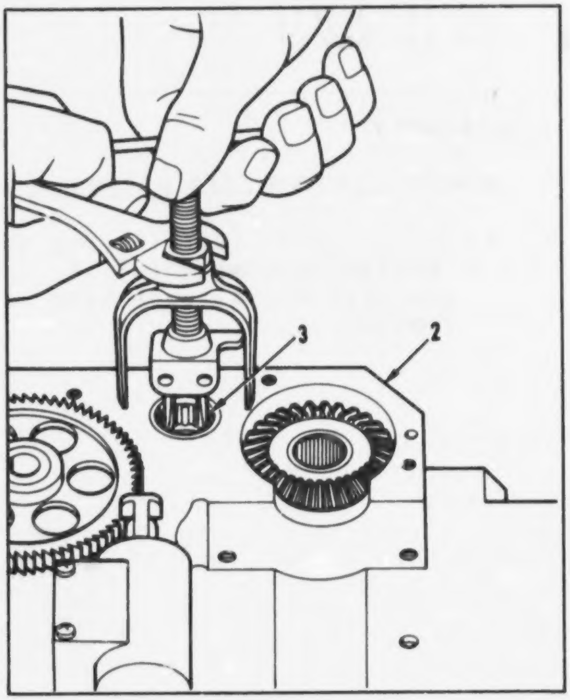


c. Use penetrating oil (D20). Apply penetrating oil (D20) around end of roller needle bearing (3) and wait 10 minutes.

CAUTION

Take extreme care to ensure that the puller arms do not hook on the receiver housing. They could cause severe damage to the receiver assembly.

d. Use inside bearing puller and adjustable wrench. Remove roller needle bearing (3) from receiver assembly (2).



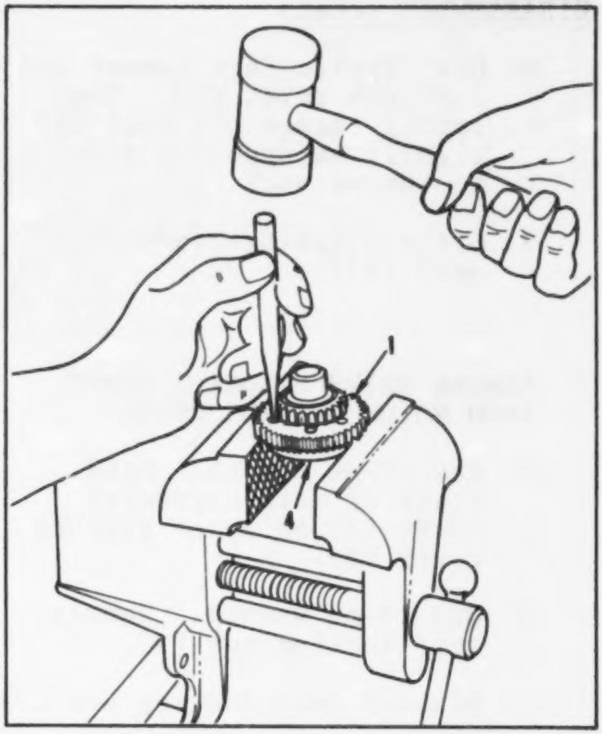
e. Discard roller needle bearing (3).

2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

DISASSEMBLY (cont)

f. Inspect ball bearing (4) on cluster gear (1) for any breaks, cracks, or bends. Check movement of bearing for binding. If above conditions exist, complete steps g thru i.

g. Use vise. Open vise jaw to an opening 1/2-inch wider than the ball bearing (4) on cluster gear (1). Rest cluster gear (1) on top of vise jaws with ball bearing (4) at bottom between jaws as shown. Allow at least 1/4-inch clearance between sides of ball bearing (4) and vise jaws.

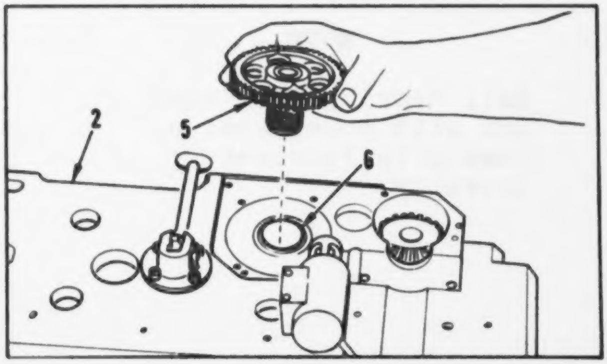


h. Use plastic-face hammer and 3/16-inch drive pin punch. Tap ball bearing (4) on bearing race with drive pin punch. Tap lightly on both sides of face until ball bearing (4) is free. Remove ball bearing (4).

i. Discard ball bearing (4).

2. **REMOVE DRIVE GEAR ASSEMBLY.**

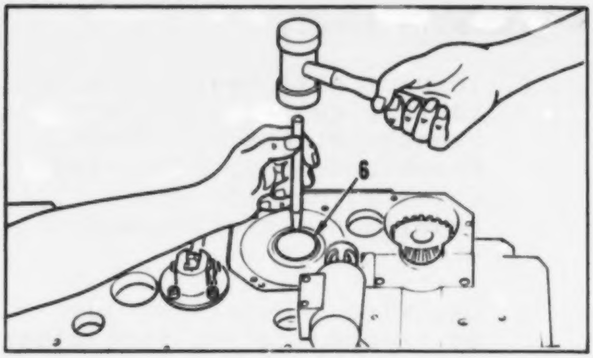
a. Lift drive gear assembly (5) out of receiver assembly (2).



b. Visually inspect spring-loaded oil seal (6) for any breaks, cracks, or bends. If above conditions exist, complete steps c and d.

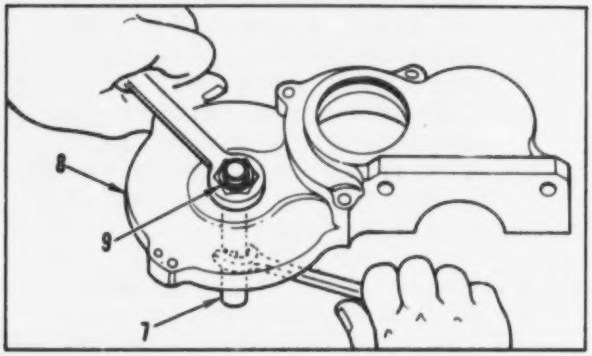
2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

DISASSEMBLY (cont)



c. Use plastic-face hammer and 1/4-inch drift pin. Tap spring-loaded oil seal (6) lightly on opposite sides to remove seal.

d. Discard spring-loaded oil seal (6).

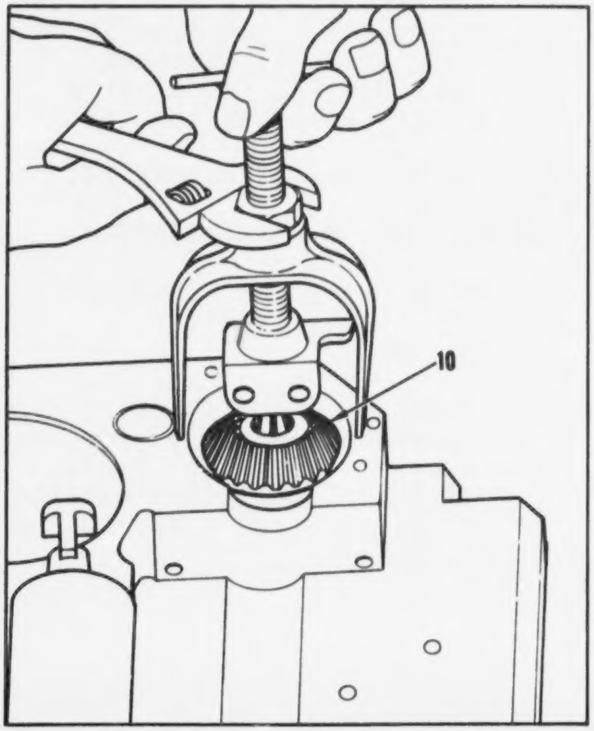


3. **REMOVE DRIVE SPROCKET SHAFT FROM MOTOR GEARBOX COVER.**

a. Use 12-mm wrench. Hold flats of drive sprocket shaft (7) on motor gearbox cover (8).

b. Use 19-mm wrench. Remove self-locking nut (9).

c. Discard self-locking nut (9).



4. **REMOVE BEVEL GEAR AND BALL BEARING.**

a. Use inside puller and adjustable wrench. Remove bevel gear (10) from receiver assembly (2).

NOTE

Ball bearing will come out with bevel gear or remain in receiver assembly.

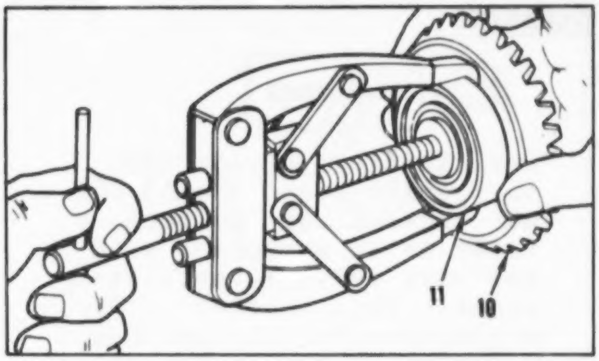
2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

DISASSEMBLY (cont)

b. Inspect ball bearing (11), in receiver assembly or on bevel gear (10), for any breaks, cracks, or bends. Check movement of ball bearing for binding. If above conditions exist, complete steps c and d.

c. Use inside puller to remove ball bearing (11) from receiver assembly, or use outside puller, as shown, to remove ball bearing (11) from bevel gear (10).

d. Discard ball bearing (11).



2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

CLEANING

WARNING

Dry cleaning solvent (SD) is flammable and should not be used near an open flame or in a smoking area. Use only in well-ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and in some cases mild irritation or inflammation.

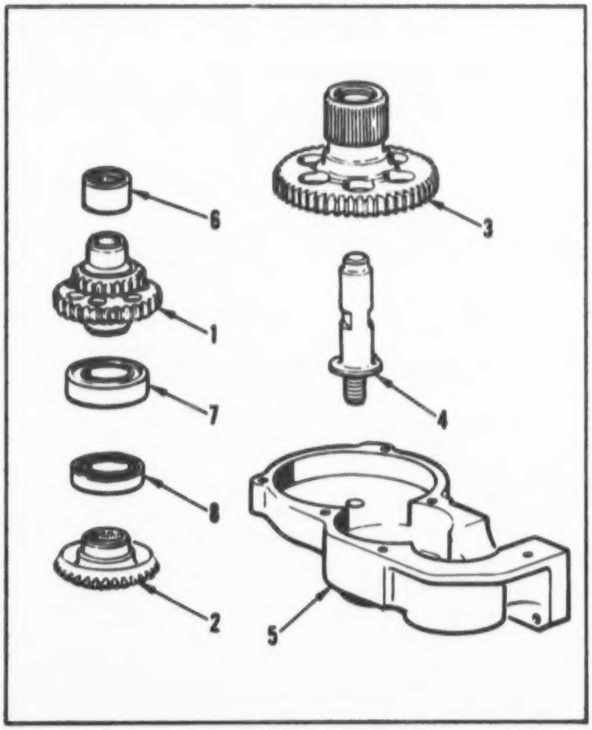
CAUTION

Do not clean bearings in solvent or allow solvent to run into bearings. Solvent will remain in bearing and dissolve lubricant, resulting in excessive wear or damage to bearing.

1. **CLEAN RECEIVER ASSEMBLY GEARS.**

   a. Use cleaning brush and solvent (D3). Clean cluster gear (1), bevel gear (2), drive gear assembly (3), drive sprocket shaft (4) and motor gearbox cover (5).

   b. Wipe bearings (6, 7, 8) with clean dry rag (D4).



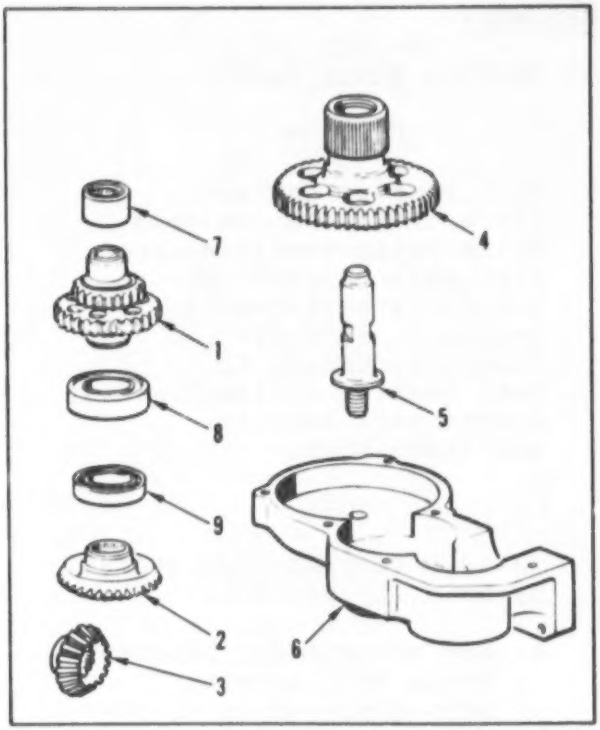
2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

INSPECTION/REPAIR

1. **INSPECT RECEIVER ASSEMBLY GEARS.**

   a. Visually check cluster gear (1), bevel gear (2), motor bevel gear (3), drive gear assembly (4), drive sprocket shaft (5), and motor gearbox cover (6) for chipping, breaks, cracks, or galls.

   b. Check movement of bearings (7, 8, 9) for binding or roughness.



NOTE

Bevel gear (receiver) and bevel gear (motor) are parts of a serialized, matched set. Both gears must be replaced if either part is defective.

   c. If any of the defects in step a or b are found, get a new part. Repeat step a or b for any replacement parts.

LUBRICATION

1. **LUBRICATE PARTS.**

   a. Use acid brush. Apply light coat of grease (D2) to all bearing races and shafts.

   b. Use acid brush. Apply light coat of grease (D2) to all gears and splines.

2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

ASSEMBLY

1. **INSTALL BEVEL GEAR.**

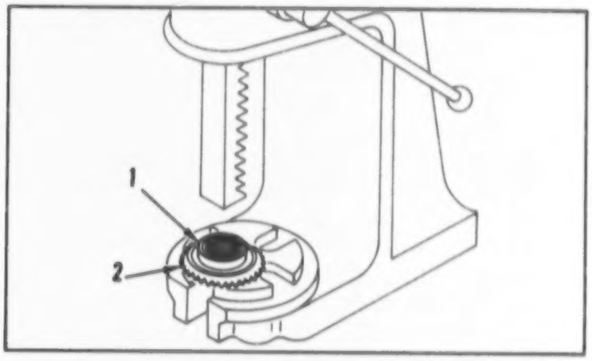
CAUTION

Ball bearing can get stuck if seated unevenly while being installed. When this happens, do not force ball bearing to seat. It could result in damage to ball bearing or gear. Remove ball bearing and start over.

NOTE

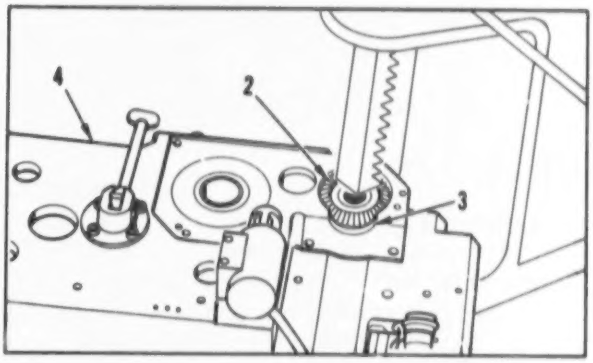
Install bearings and gears by hand, if possible.

a. Use arbor press if needed. Press ball bearing (1) onto shaft of bevel gear (2) until ball bearing is seated.



b. Insert bevel gear (2) with beveled side out, into hole (3) in receiver assembly (4).

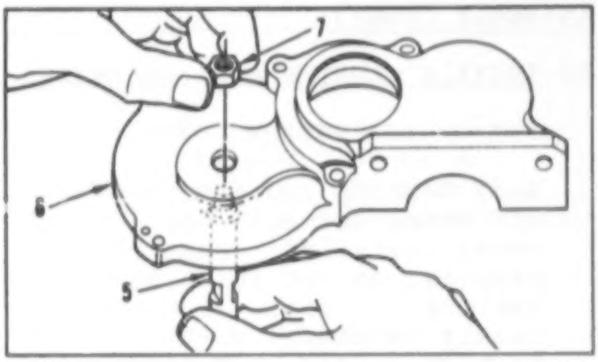
c. Use arbor press if needed. Press bevel gear (2) into receiver assembly (4) until it is seated.



ASSEMBLY (cont)

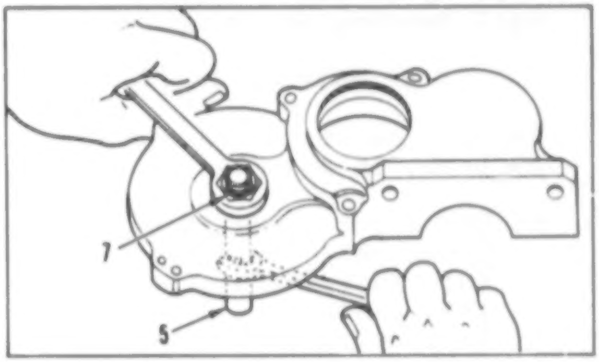
2. INSTALL DRIVE SPROCKET SHAFT.

a. Insert threaded end of drive sprocket shaft (5) through motor gearbox cover (6) as shown. Install new self-locking nut (7).



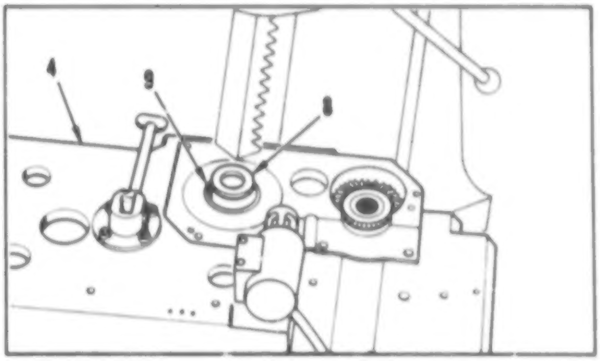
b. Use 12-mm wrench. Hold sprocket shaft (5) by the flats.

c. Use 19-mm wrench. Tighten self-locking nut (7).



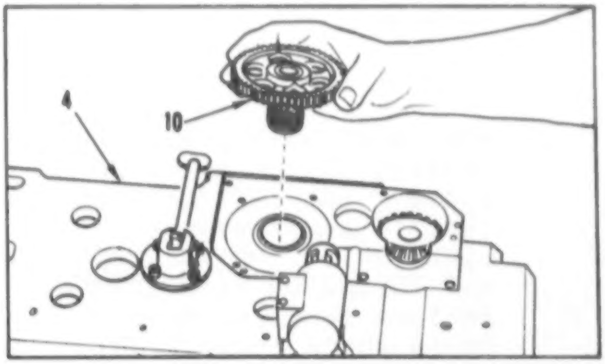
3. INSTALL DRIVE GEAR ASSEMBLY.

a. Place new spring-loaded oil seal (8) with metal ends up, evenly into large hole (9) in the receiver assembly (4).



b. Use arbor press or plastic-face hammer. Insert spring-loaded oil seal (8) into receiver assembly (4) until metal end of seal is flush with the surface of the receiver assembly.

c. Place splined end of drive gear assembly (10) into receiver assembly (4).



2-67. REPAIR RECEIVER ASSEMBLY GEARS (cont) 2-67

ASSEMBLY (cont)

4. INSTALL CLUSTER GEAR ASSEMBLY.

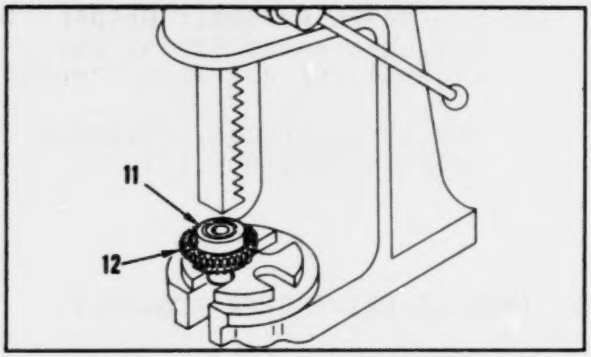
CAUTION

Ball bearing can get stuck if seated unevenly while being installed. When this happens, do not force ball bearing to seat. It could result in damage to ball bearing or gear. Remove ball bearing and start over.

NOTE

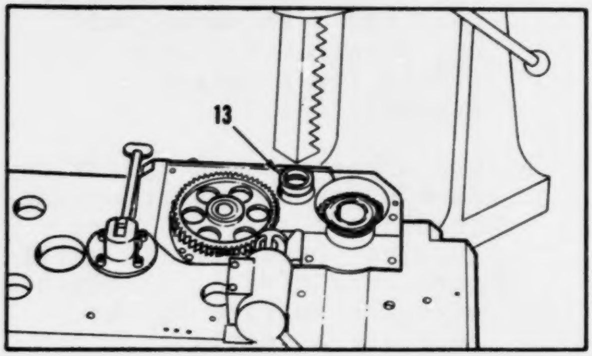
Install bearings and gears by hand, if possible.

a. Use arbor press if needed. Press ball bearing (11) onto geared end of cluster gear assembly (12) until ball bearing is seated.

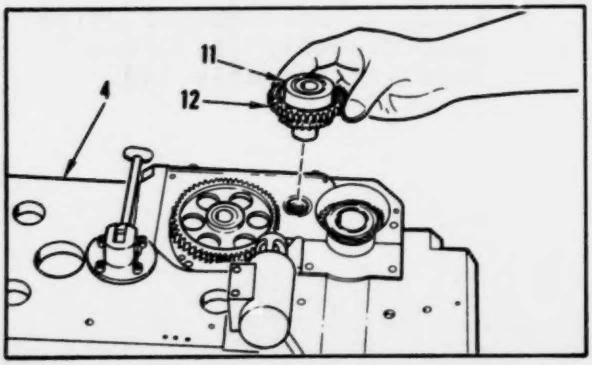


b. Place roller needle bearing (13) into receiver assembly.

c. Use arbor press or plastic-face hammer, if needed. Insert roller needle bearing (13) into receiver assembly.



d. Place cluster gear assembly (12) in receiver assembly (4) with ball bearing (11) on top.



NOTE

FOLLOW-ON MAINTENANCE: Install clutch assembly (para 2-66, INSTALLATION). Install sear assembly (para 2-63, INSTALLATION and FOLLOW-ON MAINTENANCE). Perform receiver manual cycle check (para 2-10).

Section VI. PREPARATION FOR STORAGE OR SHIPMENT

2-68. GENERAL 2-68

a. Instructions contained in Section VI cover storage and shipment preparation for the three major components of the gun. Level A (outside continental US (OCONUS)) and Level C (within continental US (CONUS)) preservation methods are covered for each major component.

b. Section VI consists of the following:

Barrel assembly preparation for storage or shipment.

Feeder assembly preparation for storage or shipment.

Receiver assembly preparation for storage or shipment.

best copy available

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY 2-69

This task covers:
- a. Preservation of barrel assembly - Level A
- b. Preservation of barrel assembly - Level C
- c. Marking of barrel wrap
- d. Installation of barrel assembly in container
- e. Marking of exterior container

INITIAL SETUP

Applicable Configurations

All

Tools

Vacuum Cleaner
  W-C-421
Sealing Machine
  MIL-S-22783
Strapping Machine
  MIL-S-43361

Materials/Parts

Wiping Rags (D4)
Fingerprint Remover
  Compound (D5)
P-9 Preservative
  Lubricating Oil (D6)
VCI Packaging Material (D9)
Packaging Tape (D10)
Greaseproof and
  Waterproof Barrer
  Material (D11)
Water Vaporproof Barrer
  Bag (D12)
Flat Steel Strapping (D13)
Spar Varnish (D14)
Clear Acrylic Coating (D15)
Black Enamel Paint (D16)
Sand Color Lusterless
  Enamel (D17)
Black Stencil Ink (D18)

Personnel Required

45T Turret Mechanic

References

MIL-P-116
PPP-B-621
AR 190-11

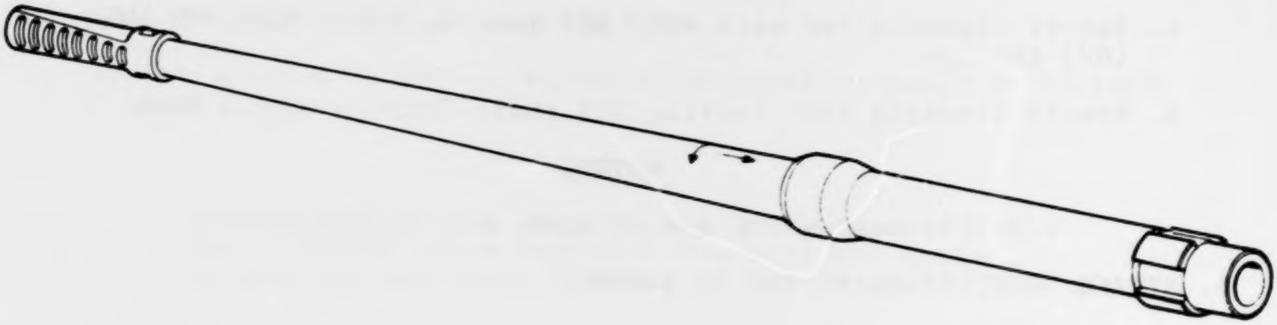
Equipment Conditions

2-24 Barrel assembly removed from gun

General Safety Instructions

Observe security requirements defined in AR 190-11.

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY (cont) 2-69



BARREL ASSEMBLY - LEVEL A PRESERVATION

NOTE

Preservation procedures will meet requirements of MIL-P-116.

1. **CLEAN BARREL ASSEMBLY.**

2. **CLEAN OFF FINGERPRINTS.**

CAUTION

After wiping barrel, do not touch bright-metal areas with your fingers. This can cause corrosion.

   a. Use clean rag (D4) soaked with fingerprint remover compound (D5). Wipe entire outside of barrel. Be extra careful to fully wipe locking lugs.

3. **LUBRICATE BARREL ASSEMBLY.**

   a. Use P-9 preservative oil (D6). Follow lubrication instructions and use only P-9 preservative oil (D6). Do not use PL-special lube oil or grease.

4. **INSERT FULL LENGTH STRIP OF VCI INTO BARREL.**

   a. Cut a strip of VCI material (D9) 3-inches wide by 92-inches long.

   b. Wind VCI strip (D9) on cleaning rod.

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY (cont) 2-69

BARREL ASSEMBLY - LEVEL A PRESERVATION (cont)

c. Insert cleaning rod with VCI (D9) into barrel. Pull VCI strip (D9) through.

d. Remove cleaning rod, leaving VCI strip (D9) in barrel bore.

NOTE

VCI (D9) must stick out of both ends of barrel.

5. **ATTACH SERVICEABILITY TAG TO BARREL.**

6. **WRAP BARREL WITH VCI.**

NOTE

Labeled side of the VCI material must be on the outside of the wrap.

a. Cut a section of VCI material (D9) 14-inches wide by 92-inches long.

b. Wrap barrel with the VCI (D9) section. Fold VCI (D9) over barrel ends.

c. Secure VCI (D9) wrap with tape (D10).

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY (cont) 2-69

BARREL ASSEMBLY - LEVEL A PRESERVATION (cont)

7. **SEAL WRAPPED BARREL IN BARRIER BAG.**

a. Put wrapped barrel in 8-inch wide (seal-to-seal) by 92-inch long barrier bag (D12).

CAUTION

Sudden collapse of barrier bag can tear open the bag. Partly close bag with one hand and apply vacuum through small opening to avoid damage.

b. Use vacuum cleaner. Remove air from barrier bag (D12).

c. Use sealing machine. Seal edges of barrier bag (D12).

8. **MARK WRAPPED BARREL ASSEMBLY.**

9. **INSTALL WRAPPED BARREL ASSEMBLY IN CONTAINER.**

10. **MARK EXTERIOR CONTAINER.**

BARREL ASSEMBLY - LEVEL C PRESERVATION

NOTE

Preservation procedures will meet requirements of MIL-P-116.

1. **WIPE DOWN BARREL ASSEMBLY.**

a. Use clean rag (D4). Remove any heavy dirt or grease from outside of barrel.

2. **ATTACH SERVICEABILITY TAG TO BARREL.**

3. **WRAP BARREL WITH GREASEPROOF BARRIER.**

a. Cut a section of greaseproof barrier material (D11) 16-inches wide by 92-inches long.

b. Wrap barrel with barrier section (D11). Fold barrier material (D11) over barrel ends.

c. Secure barrier wrap (D11) with tape (D10).

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY (cont) 2-69

BARREL ASSEMBLY - LEVEL C PRESERVATION (cont)

4. **MARK WRAPPED BARREL ASSEMBLY.**

5. **INSTALL WRAPPED BARREL ASSEMBLY IN CONTAINER.**

6. **MARK EXTERIOR CONTAINER.**

WRAPPED BARREL ASSEMBLY - MARKING

1. **MARK SEALED BARRIER BAG (LEVEL A) OR BARRIER WRAP (LEVEL C).**

NOTE

The following data will be legibly marked on the wrapped barrel assembly before installing in container.

   a. NSN 1005-01-086-1400.

   b. 1 EA.

   c. Preservation level (A or C) and date.

   d. Serial number of gun.

BARREL ASSEMBLY - CONTAINER INSTALLATION

1. **INSTALL WRAPPED BARREL ASSEMBLY IN CONTAINER.**

   a. Install lower supports in container.

   b. Position wrapped barrel in container as shown.

CAUTION

If barrel package is punctured, it will not be protected against moisture corrosion.

   c. Pad the wrapped barrel to protect from any sharp edges.

   d. Install container upper supports as shown.

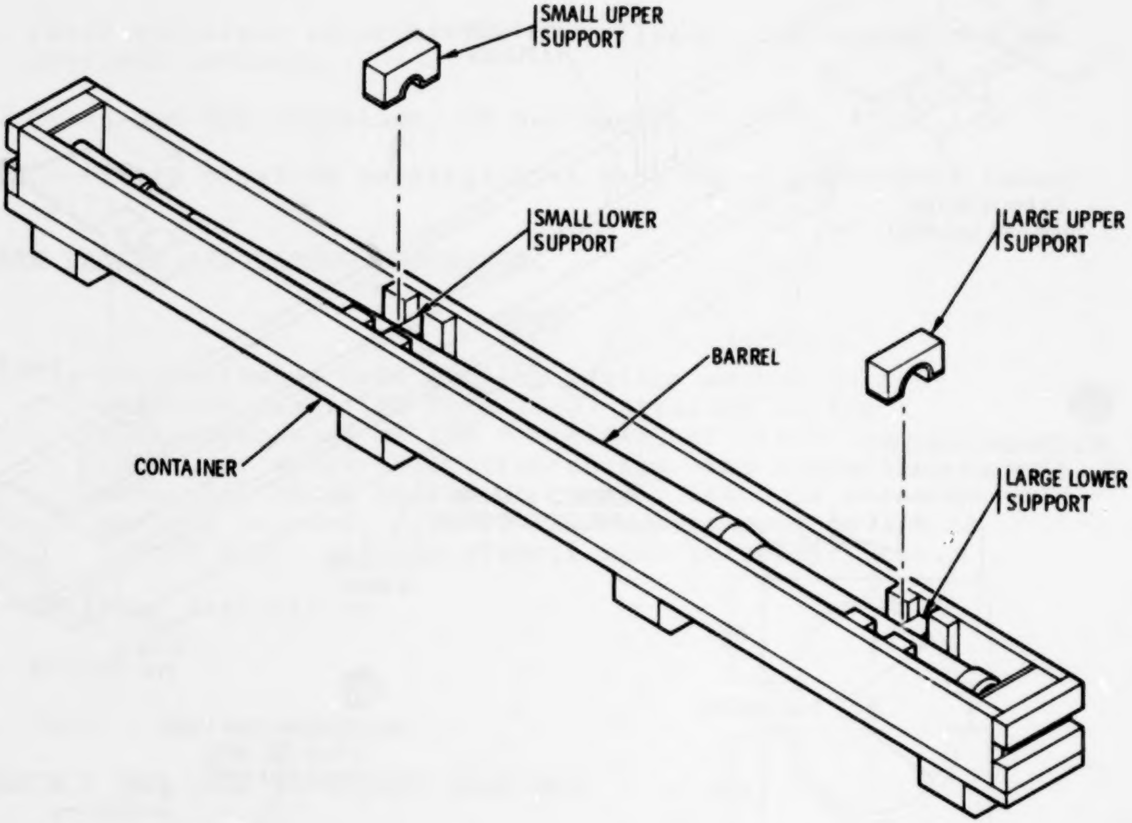
2. **COMPLETE DA FORM 2408-4 WEAPONS RECORD DATA CARD.**

3. **POSITION CONTAINER TOP AND NAIL SECURE.**

4. **SECURELY STRAP CLOSED CONTAINER.**

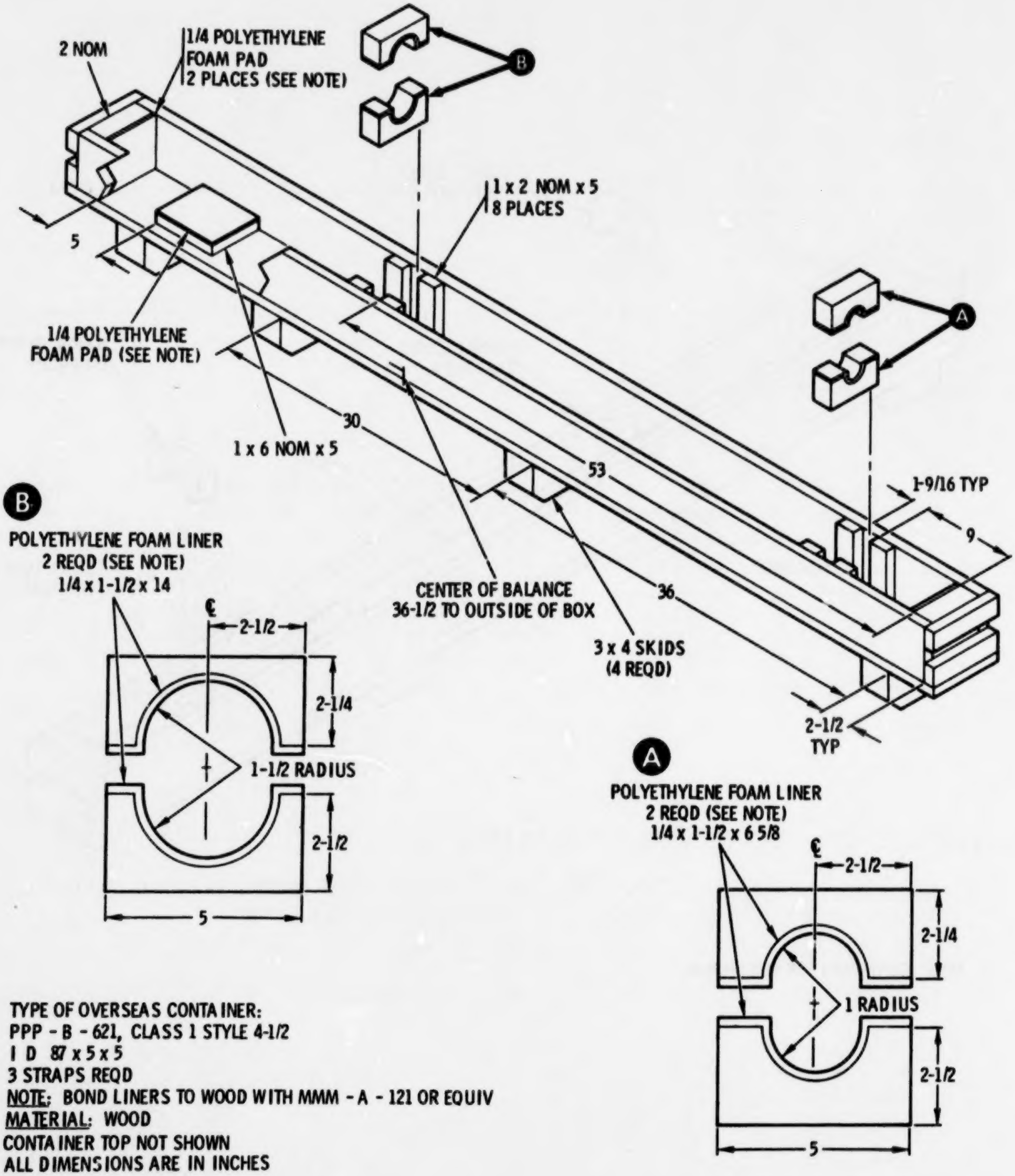
   a. Use strapping machine and flat steel straps (D13).

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY (cont) 2-69


SMALL UPPER SUPPORT
SMALL LOWER SUPPORT
LARGE UPPER SUPPORT
BARREL
CONTAINER
LARGE LOWER SUPPORT

NOTE: CONTAINER TOP NOT SHOWN

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY (cont) 2-69


2 NOM
1/4 POLYETHYLENE FOAM PAD 2 PLACES (SEE NOTE)
B
1 x 2 NOM x 5 8 PLACES
5
A
1/4 POLYETHYLENE FOAM PAD (SEE NOTE)
30
1 x 6 NOM x 5
53
1-9/16 TYP
9
B
POLYETHYLENE FOAM LINER 2 REQD (SEE NOTE) 1/4 x 1-1/2 x 14
CENTER OF BALANCE 36-1/2 TO OUTSIDE OF BOX
36
3 x 4 SKIDS (4 REQD)
℄
2-1/2
2-1/4
1-1/2 RADIUS
2-1/2
5
2-1/2 TYP
A
POLYETHYLENE FOAM LINER 2 REQD (SEE NOTE) 1/4 x 1-1/2 x 6 5/8
℄
2-1/2
2-1/4
1 RADIUS
2-1/2
5

TYPE OF OVERSEAS CONTAINER:
PPP - B - 621, CLASS 1 STYLE 4-1/2
I D 87 x 5 x 5
3 STRAPS REQD
NOTE: BOND LINERS TO WOOD WITH MMM - A - 121 OR EQUIV
MATERIAL: WOOD
CONTAINER TOP NOT SHOWN
ALL DIMENSIONS ARE IN INCHES

2-69. PREPARATION FOR STORAGE OR SHIPMENT OF BARREL ASSEMBLY (cont) 2-69

EXTERIOR CONTAINER - MARKING

NOTE

Exterior container must not be marked with NSN, part number or item name.

1. **PREPARE CONTAINER FOR MARKING.**

   a. Check container exterior for cleanliness, contamination, and previous markings.

   b. Clean and dry container, if necessary.

   c. Cover any previous markings with sand color lusterless enamel (D17).

2. **MARK PACKED AND CLOSED CONTAINER.**

NOTE

The following data will be legibly marked on a shipment label (DD Form 1387) attached to the left upper side of the container, or brush-, roll-, or spray-stencilled on the same container area with black enamel or stencil ink. If stencil marking is used, letters and numbers must be 3/8 to 1-inch high, and the stencil must be sharply cut.

   a. Shipping destination.

   b. Weight.

   c. Cube.

3. **PROTECT AND SEAL CONTAINER MARKINGS.**

   a. Use spar varnish (D14) or clear acrylic coating (D15). Fully over-coat shipping label or stencilled markings.

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY 2-70

This task covers:
a. Preservation of feeder assembly - Level A
b. Preservation of feeder assembly - Level C
c. Marking of feeder wrap
d. Installation of feeder assembly in container
e. Marking of exterior container

INITIAL SETUP

Applicable Configurations

All

Tools

Vacuum Cleaner W-C-421
Sealing Machine MIL-S-22783
Strapping Machine MIL-S-43361

Materials/Parts

Wiping Rags (D4)
Fingerprint Remover Compound (D5)
P-9 Preservative Lubricating Oil (D6)
VCI Packaging Material (D9)
Packaging Tape (D10)
Greaseproof and Waterproof Barrer Material (D11)
Water Vaporproof Barrer Bag (D12)
Flat Steel Strapping (D13)
Spar Varnish (D14)
Clear Acrylic Coating (D15)
Black Enamel Paint (D16)
Sand Color Lusterless Enamel (D17)
Black Stencil Ink (D18)

Personnel Required

45T Turret Mechanic

References

MIL-P-116
PPP-B-621
AR 190-11

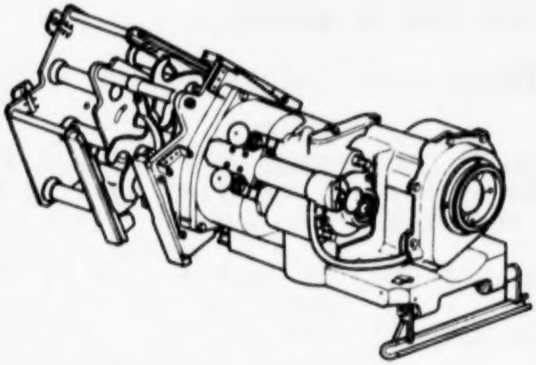
Equipment Conditions

2-27 Feeder assembly removed from gun

General Safety Instructions

Observe security requirements defined in AR 190-11.

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70



FEEDER ASSEMBLY - LEVEL A PRESERVATION

NOTE

Preservation procedures will meet requirements of MIL-P-116.

1. **CLEAN FEEDER ASSEMBLY.**

2. **CLEAN OFF FINGERPRINTS.**

CAUTION

After wiping feeder, do not touch bright-metal areas with your fingers. This can cause corrosion.

   a. Use clean rag (D4) soaked with fingerprint remover compound (D5). Wipe entire outside of feeder. Be extra careful to fully wipe positioner assembly areas.

3. **LUBRICATE FEEDER ASSEMBLY.**

   a. Use P-9 preservative oil (D6). Follow lubrication instructions and use only P-9 preservative oil (D6). Do not use PL-special lube oil or grease.

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70

FEEDER ASSEMBLY - LEVEL A PRESERVATION (cont)

4. **ATTACH SERVICEABILITY TAG TO FEEDER.**

5. **WRAP FEEDER WITH VCI.**

NOTE

> Labeled side of the VCI material must be on the outside of the wrap.

a. Cut a section of VCI (D9) 36-inches wide by 42-inches long.

b. Wrap feeder with the VCI (D9) section. Fold VCI (D9) over ends of feeder.

c. Secure VCI (D9) wrap with tape (D10).

6. **SEAL WRAPPED FEEDER IN BARRIER BAG.**

a. Put wrapped feeder in 24-inch wide (seal-to-seal) by 36-inch long barrier bag (D12).

CAUTION

> Sudden collapse of barrier bag can tear open the bag. Partly close bag with one hand and apply vacuum through small opening to avoid damage.

b. Use vacuum cleaner. Remove air from barrier bag (D12).

c. Use sealing machine. Seal edges of barrier bag (D12).

7. **MARK WRAPPED FEEDER ASSEMBLY.**

8. **INSTALL WRAPPED FEEDER ASSEMBLY IN CONTAINER.**

9. **MARK EXTERIOR CONTAINER.**

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70

FEEDER ASSEMBLY - LEVEL C PRESERVATION

NOTE

Preservation procedures will meet requirements of MIL-P-116.

1. **WIPE DOWN FEEDER ASSEMBLY AND ACCESSIBLE SPROCKET SURFACES.**
   a. Use clean rag (D4). Remove any heavy dirt or grease from strippers and positioner.
2. **ATTACH SERVICEABILITY TAG TO FEEDER.**
3. **WRAP FEEDER WITH GREASEPROOF BARRIER.**
   a. Cut a section of greaseproof barrier material (D11) 36-inches wide by 42-inches long.
   b. Wrap feeder with barrier section (D11). Fold barrier material (D11) over ends of feeder.
   c. Secure barrier wrap (D11) with tape (D10).
4. **MARK WRAPPED FEEDER ASSEMBLY.**
5. **INSTALL WRAPPED FEEDER ASSEMBLY IN CONTAINER.**
6. **MARK EXTERIOR CONTAINER.**

WRAPPED FEEDER ASSEMBLY - MARKING

1. **MARK SEALED BARRIER BAG (LEVEL A) OR BARRIER WRAP (LEVEL C).**

NOTE

The following data will be legibly marked on the wrapped feeder assembly before installing in container.

   a. NSN 1005-01-105-5191.
   b. 1 EA.
   c. Preservation level (A or C) and date.
   d. Serial number of gun.

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70

FEEDER ASSEMBLY - CONTAINER INSTALLATION

1. **INSTALL WRAPPED FEEDER ASSEMBLY IN CONTAINER.**

   a. Install lower supports in container.

   b. Position wrapped feeder in container as shown.

CAUTION

If feeder package is punctured, it will not be protected against moisture corrosion.

   c. Pad the wrapped feeder to protect from any sharp edges.

   d. Install container upper supports as shown.

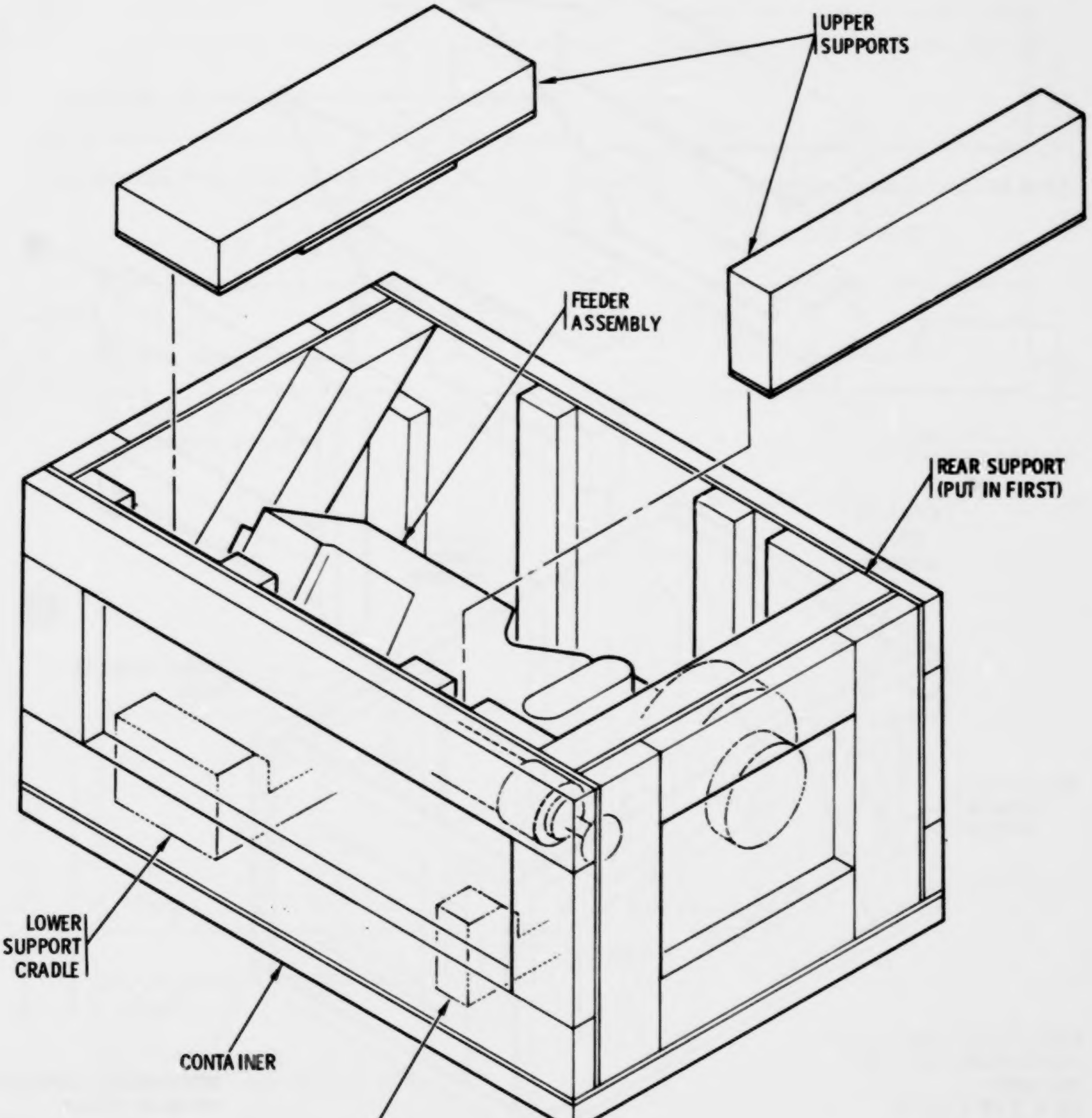
2. **COMPLETE DA FORM 2408-4 WEAPONS RECORD DATA CARD.**

3. **POSITION CONTAINER TOP AND NAIL SECURE.**

4. **SECURELY STRAP CLOSED CONTAINER.**

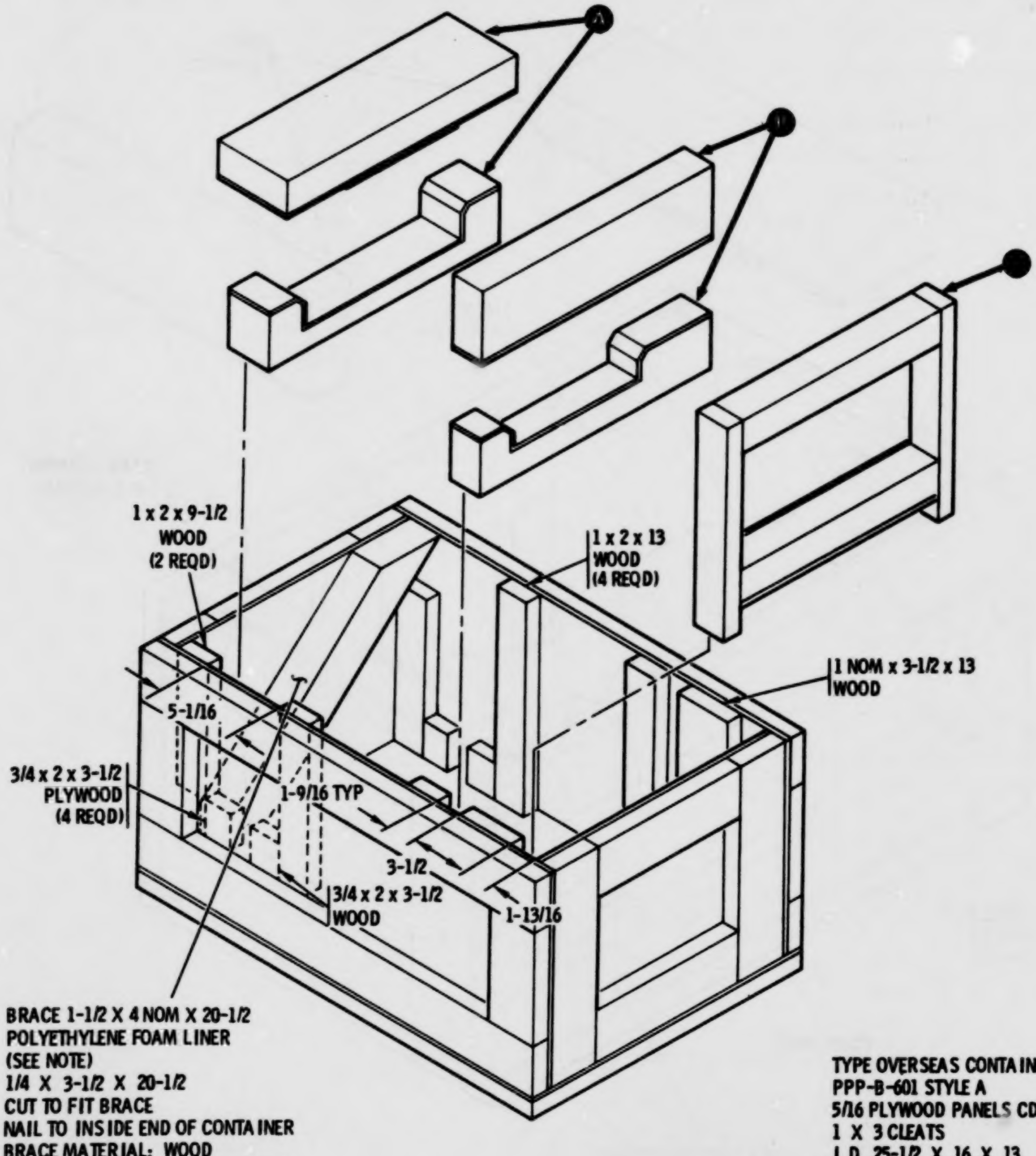
   a. Use strapping machine and flat steel straps (D13).

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70


UPPER SUPPORTS
FEEDER ASSEMBLY
REAR SUPPORT (PUT IN FIRST)
LOWER SUPPORT CRADLE
CONTAINER
LOWER SUPPORT CRADLE

NOTE: CONTAINER TOP NOT SHOWN

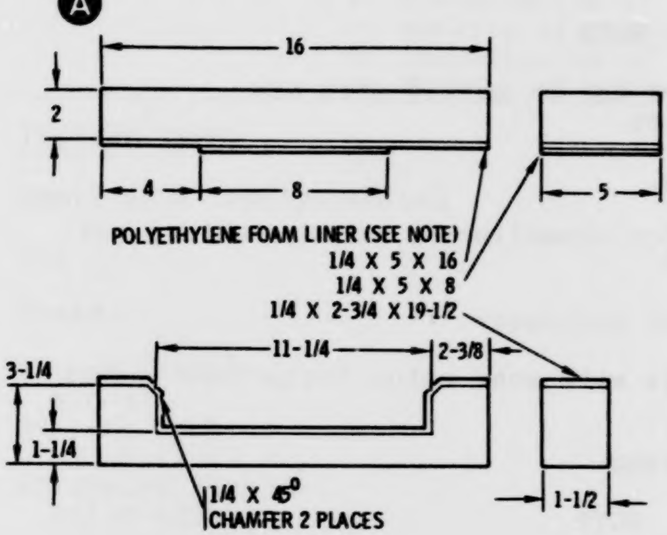
2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70

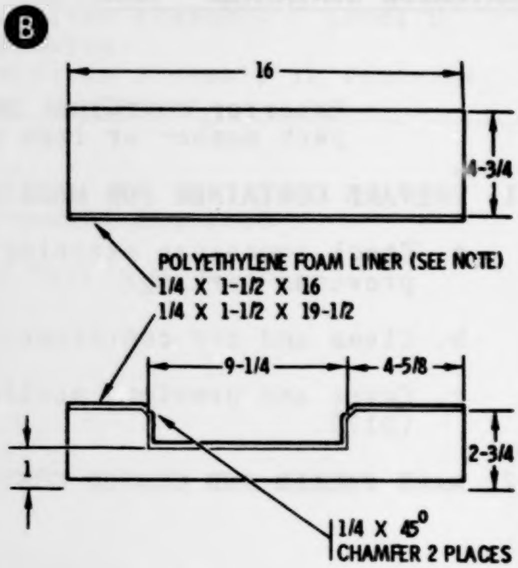

A
1 x 2 x 9-1/2
WOOD
(2 REQD)
1 x 2 x 13
WOOD
(4 REQD)
1 NOM x 3-1/2 x 13
WOOD
5-1/16
3/4 x 2 x 3-1/2
PLYWOOD
(4 REQD)
1-9/16 TYP
3-1/2
3/4 x 2 x 3-1/2
WOOD
1-13/16

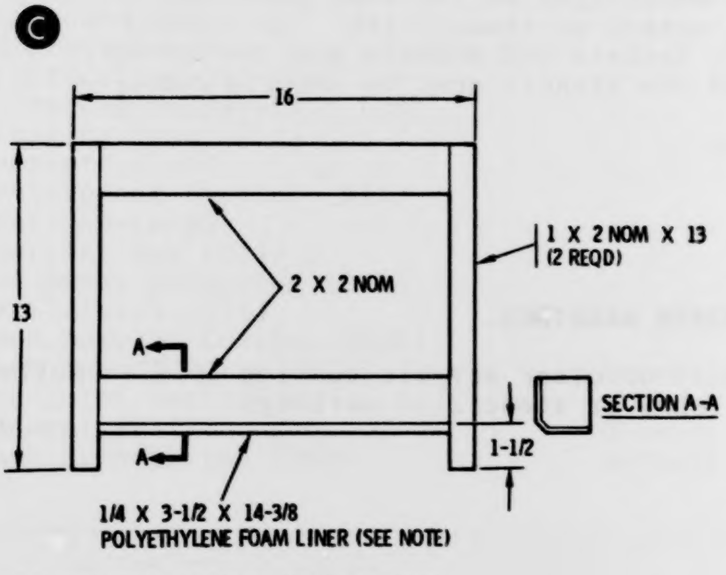
BRACE 1-1/2 X 4 NOM X 20-1/2
POLYETHYLENE FOAM LINER
(SEE NOTE)
1/4 X 3-1/2 X 20-1/2
CUT TO FIT BRACE
NAIL TO INSIDE END OF CONTAINER
BRACE MATERIAL; WOOD
NOTE: BOND LINER TO WOOD WITH
MMM-A-121 OR EQUIV

TYPE OVERSEAS CONTAINER:
PPP-B-601 STYLE A
5/16 PLYWOOD PANELS CDX
1 X 3 CLEATS
I D 25-1/2 X 16 X 13
2 STRAPS
DIMENSIONS ARE IN INCHES

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70


A
16
2
4
8
5
POLYETHYLENE FOAM LINER (SEE NOTE)
1/4 X 5 X 16
1/4 X 5 X 8
1/4 X 2-3/4 X 19-1/2
11-1/4
2-3/8
3-1/4
1-1/4
1/4 X 45°
CHAMFER 2 PLACES
1-1/2


B
16
4-3/4
POLYETHYLENE FOAM LINER (SEE NOTE)
1/4 X 1-1/2 X 16
1/4 X 1-1/2 X 19-1/2
9-1/4
4-5/8
1
2-3/4
1/4 X 45°
CHAMFER 2 PLACES


C
16
13
2 X 2 NOM
1 X 2 NOM X 13
(2 REQD)
A
A
SECTION A-A
1-1/2
1/4 X 3-1/2 X 14-3/8
POLYETHYLENE FOAM LINER (SEE NOTE)

SUPPORT MATERIAL: WOOD 2 X NOM (THICKNESS)

NOTE: BOND LINERS TO WOOD WITH ADHESIVE MMM-A-121 OR EQUIV

ALL DIMENSIONS ARE IN INCHES

2-70. PREPARATION FOR STORAGE OR SHIPMENT OF FEEDER ASSEMBLY (cont) 2-70

EXTERIOR CONTAINER - MARKING

NOTE

Exterior container must not be marked with NSN, part number or item name.

1. **PREPARE CONTAINER FOR MARKING.**

   a. Check container exterior for cleanliness, contamination, and previous markings.

   b. Clean and dry container, if necessary.

   c. Cover any previous markings with sand color lusterless enamel (D17).

2. **MARK PACKED AND CLOSED CONTAINER.**

NOTE

The following data will be legibly marked on a shipment label (DD Form 1387) attached to the left upper side of the container, or brush-, roll-, or spray-stencilled on the same container area with black enamel or stencil ink. If stencil marking is used, letters and numbers must be 3/8 to 1-inch high, and the stencil must be sharply cut.

   a. Shipping destination.

   b. Weight.

   c. Cube.

3. **PROTECT AND SEAL CONTAINER MARKINGS.**

   a. Use spar varnish (D14) or clear acrylic coating (D15). Fully over-coat shipping label or stencilled markings.

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY 2-71

This task covers:
a. Preservation of receiver assembly - Level A
b. Preservation of receiver assembly - Level C
c. Marking of receiver wrap
d. Installation of receiver assembly in container
e. Marking of exterior container

INITIAL SETUP

Applicable Configurations

All

Tools

Vacuum Cleaner
  W-C-421
Sealing Machine
  MIL-S-22783
Strapping Machine
  MIL-S-43361

Materials/Parts

Wiping Rags (D4)
Fingerprint Removal Compound (D5)
P-9 Preservative Lubricating Oil (D6)
VCI Packaging Material (D9)
Packaging Tape (D10)
Greaseproof and Waterproof Barrier (D11)
Water Vaporproof Barrier Bag (D12)
Flat Steel Strapping (D13)
Spar Varnish (D14)
Clean Acrylic Coating (D15)
Black Enamel Paint (D16)
Sand Color Lusterless Enamel (D17)
Black Stencil Ink (D18)

Personnel Required

45T Turret Mechanic

References

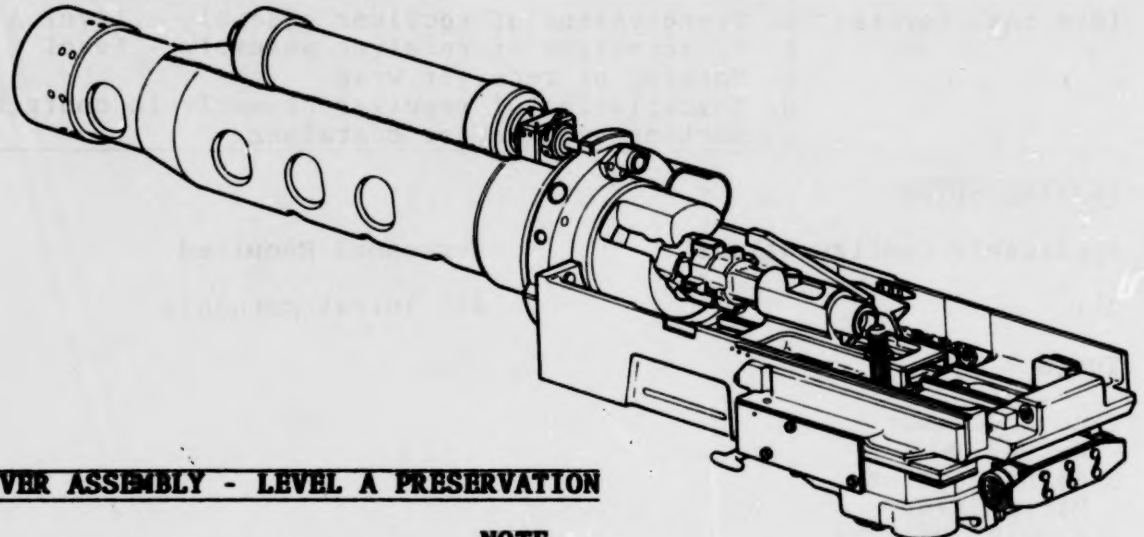
MIL-P-116
PPP-B-621
AR 190-11

General Safety Instructions

Observe security requirements defined in AR 190-11.

PREPARATION FOR STORAGE OR SHIPMENT (cont)

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71



RECEIVER ASSEMBLY - LEVEL A PRESERVATION

NOTE

Preservation procedures will meet requirements of MIL-P-116.

1. **CLEAN RECEIVER ASSEMBLY.**

2. **CLEAN OFF FINGERPRINTS.**

CAUTION

After wiping receiver, do not touch bright-metal areas with your fingers. This can cause corrosion.

a. Use clean rag (D4) soaked with fingerprint remover compound (D5). Wipe entire outside of receiver, breech, and bore of barrel support. Be extra careful to fully wipe bolt and track assembly, carrier, and chain.

3. **LUBRICATE RECEIVER ASSEMBLY.**

a. Use P-9 preservative oil (D6). Follow lubrication instructions and use only P-9 preservative oil (D6). Do not use PL-special lube oil or grease.

4. **ATTACH SERVICEABILITY TAG TO BARREL.**

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71

RECEIVER ASSEMBLY - LEVEL A PRESERVATION

5. **WRAP RECEIVER WITH VCI.**

NOTE

Labeled side of the VCI material must be on the outside of the wrap.

a. Cut a section of VCI (D9) material 36-inches wide by 64-inches long.

b. Wrap receiver with VCI (D9) section. Fold VCI (D9) over ends of receiver.

c. Secure VCI wrap (D9) with tape (D10).

6. **SEAL WRAPPED RECEIVER IN BARRIER BAG.**

a. Put wrapped receiver in 18-inch wide (seal-to-seal) by 64-inch long barrier bag (D12).

CAUTION

Sudden collapse of barrier bag can tear open the bag. Partly close bag with one hand and apply vacuum through small opening to avoid damage.

b. Use vacuum cleaner. Remove air from barrier bag (D12).

c. Use sealing machine. Seal edges of barrier bag (D12).

7. **MARK WRAPPED RECEIVER ASSEMBLY.**

8. **INSTALL WRAPPED RECEIVER ASSEMBLY IN CONTAINER.**

9. **MARK EXTERIOR CONTAINER.**

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71

RECEIVER ASSEMBLY - LEVEL C PRESERVATION

NOTE

Preservation procedures will meet requirements of MIL-P-116.

1. **WIPE DOWN RECEIVER ASSEMBLY.**

   a. Use clean rag (D4). Remove any heavy dirt or grease from outside of receiver, bolt and track assembly, and breech.

2. **ATTACH SERVICEABILITY TAG TO RECEIVER.**

3. **WRAP RECEIVER WITH GREASEPROOF BARRIER.**

   a. Cut a section of greaseproof barrier material (D11) 36-inches wide by 64-inches long.

   b. Wrap receiver with barrier section (D11). Fold barrier material (D11) over ends of receiver.

   c. Secure barrier wrap (D11) with tape (D10).

4. **MARK WRAPPED RECEIVER ASSEMBLY.**

5. **INSTALL WRAPPED RECEIVER ASSEMBLY IN CONTAINER.**

6. **MARK EXTERIOR CONTAINER.**

WRAPPED RECEIVER ASSEMBLY - MARKING

1. **MARK SEALED BARRIER BAG (LEVEL A) OR BARRIER WRAP (LEVEL C).**

NOTE

The following data will be legibly marked on the wrapped receiver assembly before installing in container.

   a. NSN None.

   b. 1 EA.

   c. Preservation level (A or C) and date.

   d. Serial number of gun.

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71

RECEIVER ASSEMBLY - CONTAINER INSTALLATION

1. **INSTALL WRAPPED RECEIVER ASSEMBLY IN CONTAINER.**

    a. Install lower supports in container.

    b. Position wrapped receiver in container as shown.

CAUTION

> If receiver package is punctured, it will not be protected against moisture corrosion.

    c. Pad the wrapped receiver to protect from any sharp edges.

    d. Install container upper supports as shown.

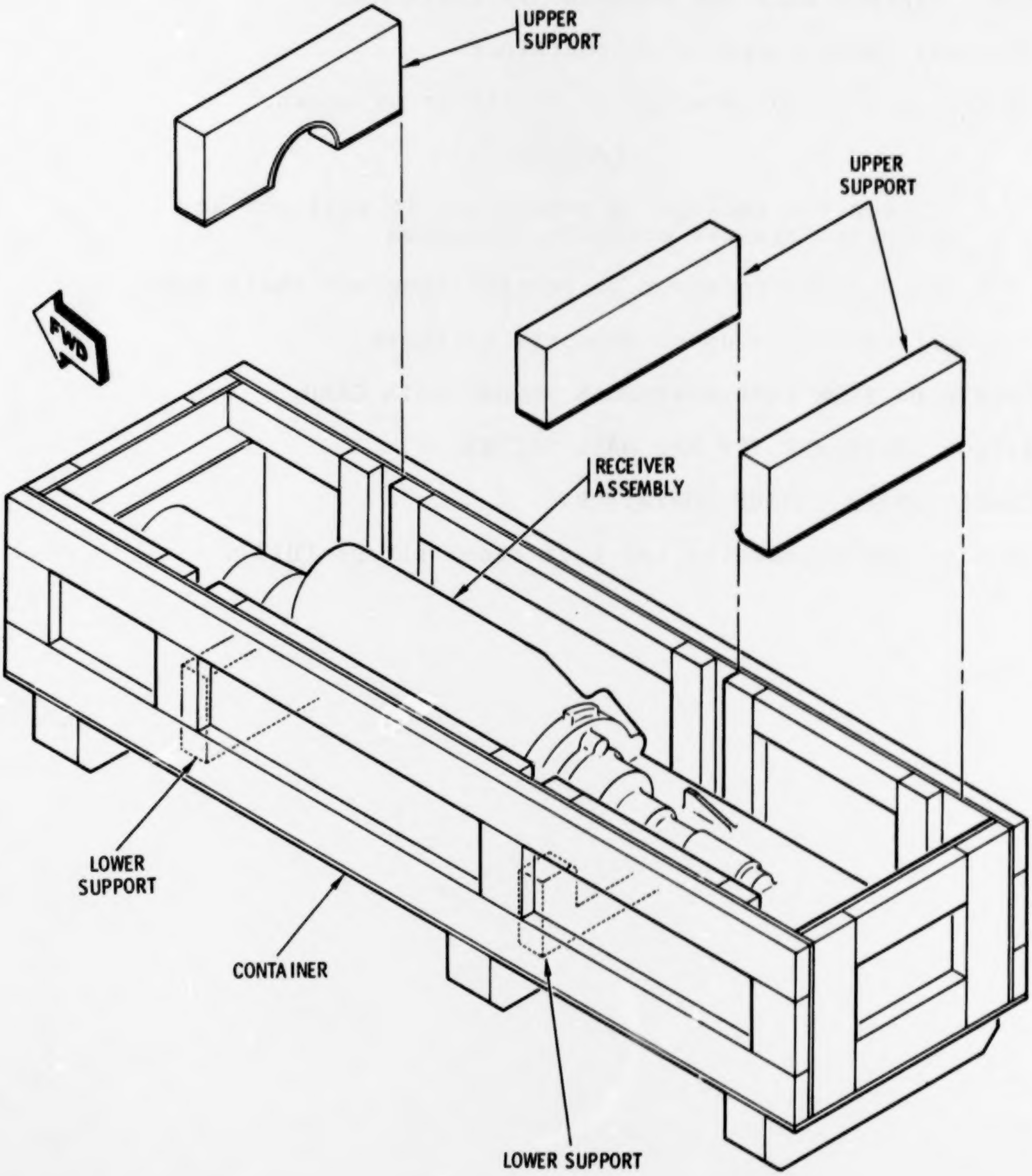
2. **COMPLETE DA FORM 2408-4 WEAPONS RECORD DATA CARD.**

3. **POSITION CONTAINER TOP AND NAIL SECURE.**

4. **SECURELY STRAP CLOSED CONTAINER.**

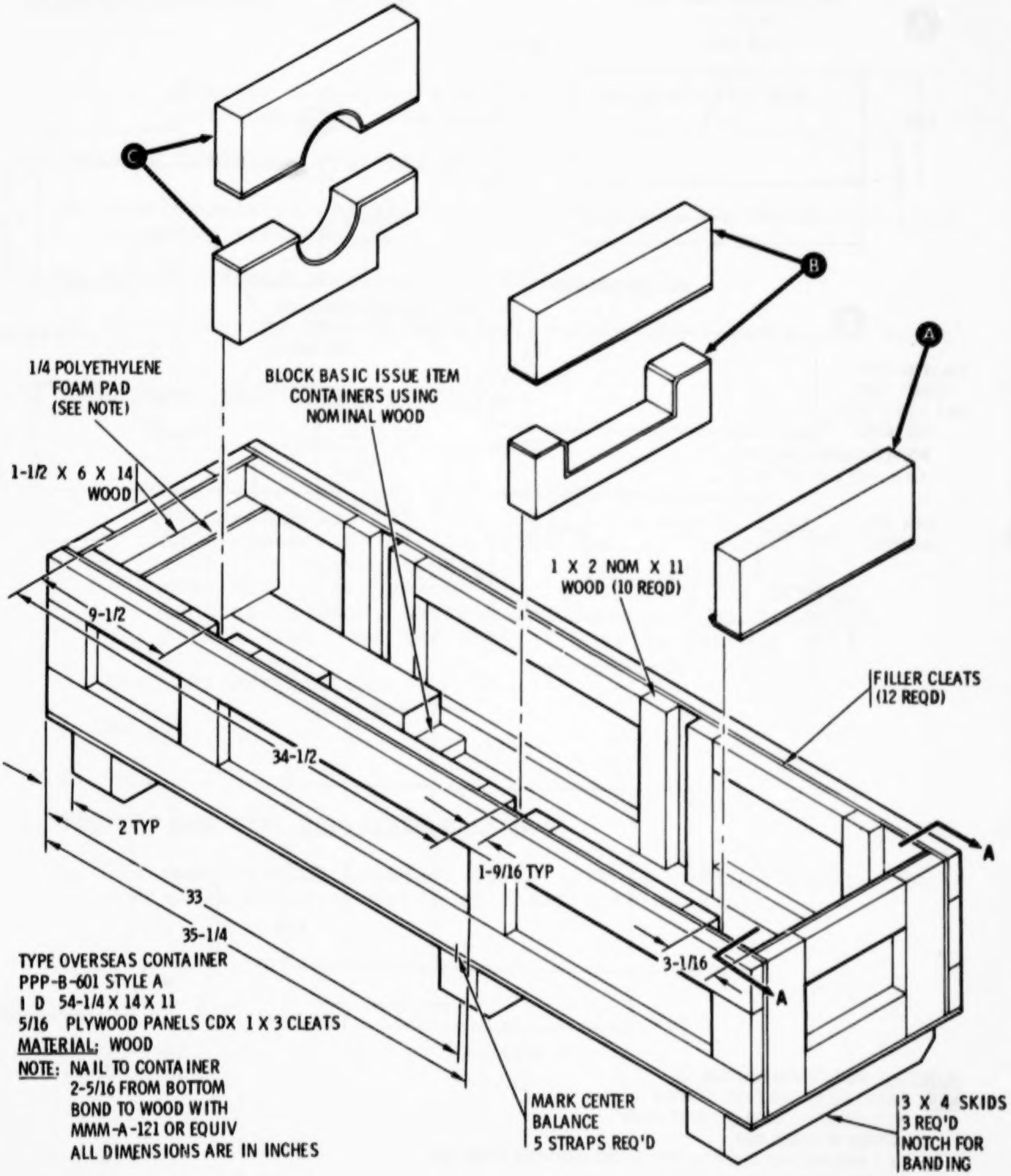
    a. Use strapping machine and flat steel straps (D13).

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71


UPPER SUPPORT
UPPER SUPPORT
FWD
RECEIVER ASSEMBLY
LOWER SUPPORT
CONTAINER
LOWER SUPPORT

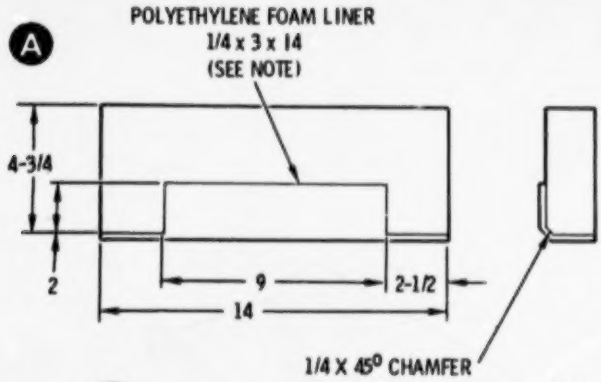
NOTE: CONTAINER TOP NOT SHOWN

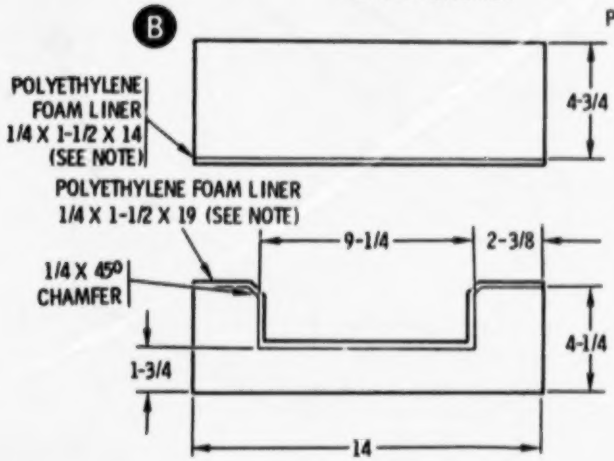
2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71

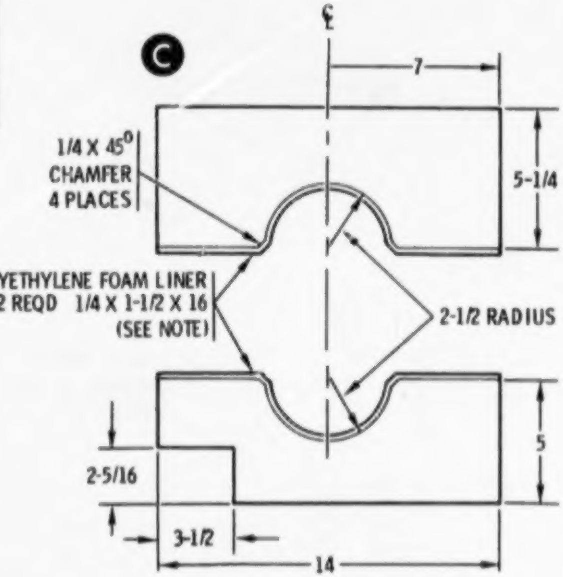

C
B
A
1/4 POLYETHYLENE FOAM PAD (SEE NOTE)
BLOCK BASIC ISSUE ITEM CONTAINERS USING NOMINAL WOOD
1-1/2 X 6 X 14 WOOD
1 X 2 NOM X 11 WOOD (10 REQD)
9-1/2
FILLER CLEATS (12 REQD)
34-1/2
2 TYP
A
1-9/16 TYP
33
35-1/4
3-1/16
A
MARK CENTER BALANCE 5 STRAPS REQ'D
3 X 4 SKIDS 3 REQ'D NOTCH FOR BANDING

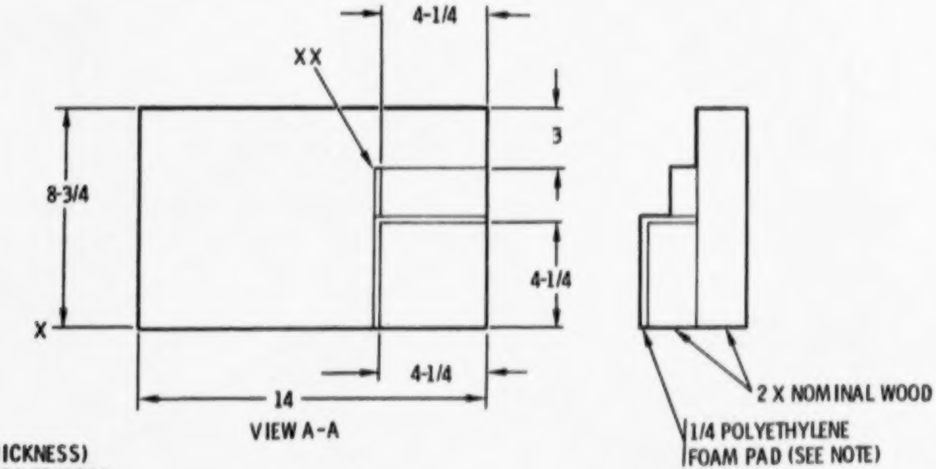
TYPE OVERSEAS CONTAINER
PPP-B-601 STYLE A
I D 54-1/4 X 14 X 11
5/16 PLYWOOD PANELS CDX 1 X 3 CLEATS
MATERIAL: WOOD
NOTE: NAIL TO CONTAINER
2-5/16 FROM BOTTOM
BOND TO WOOD WITH
MMM-A-121 OR EQUIV
ALL DIMENSIONS ARE IN INCHES

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71


A
POLYETHYLENE FOAM LINER
1/4 x 3 x 14
(SEE NOTE)
4-3/4
2
9
2-1/2
14
1/4 X 45° CHAMFER


B
POLYETHYLENE FOAM LINER 1/4 X 1-1/2 X 14 (SEE NOTE)
4-3/4
POLYETHYLENE FOAM LINER 1/4 X 1-1/2 X 19 (SEE NOTE)
9-1/4
2-3/8
1/4 X 45° CHAMFER
1-3/4
4-1/4
14


C
℄
7
1/4 X 45° CHAMFER 4 PLACES
5-1/4
POLYETHYLENE FOAM LINER 2 REQD 1/4 X 1-1/2 X 16 (SEE NOTE)
2-1/2 RADIUS
5
2-5/16
3-1/2
14


4-1/4
XX
3
8-3/4
4-1/4
X
4-1/4
14
2 X NOMINAL WOOD
1/4 POLYETHYLENE FOAM PAD (SEE NOTE)

VIEW A-A

MATERIAL: WOOD 2 NOM (THICKNESS)

NOTE: BOND LINERS AND PADS TO WOOD WITH ADHESIVE MMM-A-121 OR EQUIV

X BOTTOM OF CONTAINER

XX 1 x 2 NOMINAL WOOD BLOCK WITH 1/4 POLYETHYLENE FOAM PAD

ALL DIMENSIONS ARE IN INCHES

2-71. PREPARATION FOR STORAGE OR SHIPMENT OF RECEIVER ASSEMBLY (cont) 2-71

EXTERIOR CONTAINER - MARKING

NOTE

Exterior container must not be marked with NSN, part number or item name.

1. **PREPARE CONTAINER FOR MARKING.**

   a. Check container exterior for cleanliness, contamination, and previous markings.

   b. Clean and dry container, if necessary.

   c. Cover any previous markings with sand color lusterless enamel (D17).

2. **MARK PACKED AND CLOSED CONTAINER.**

   NOTE

   The following data will be legibly marked on a shipment label (DD Form 1387) attached to the left upper side of the container, or brush-, roll-, or spray-stencilled on the same container area with black enamel or stencil ink. If stencil marking is used, letters and numbers must be 3/8 to 1-inch high, and the stencil must be sharply cut.

   a. Shipping destination.

   b. Weight.

   c. Cube.

3. **PROTECT AND SEAL CONTAINER MARKINGS.**

   a. Use spar varnish (D14) or clear acrylic coating (D15). Fully over-coat shipping label or stencilled markings.

APPENDIX A

REFERENCES

A-1. SCOPE

This appendix lists all forms, field manuals, technical manuals, regulations, and miscellaneous publications referenced in this manual.

A-2. TECHNICAL MANUALS

TM 750-244-7	Procedures for Destruction of Equipment to Prevent Enemy Use.
TM 11-6625-203-12	Operator and Organizational Maintenance: Multimeter AN/URM-105, AN/URM-105C, and AN/PSN-45 Including Multimeter ME-77/U and ME-77C/U

A-3. SUPPLY BULLETINS

SB 708-42	Federal Supply Code for Manufacturers: United States and Canada -- Code to Name (Cataloging Handbook H4-2) GSA-FSS-H4-2

A-4. FIELD MANUAL

FM 21-11	First Aid for Soldiers

A-5. ARMY REGULATIONS AND PAMPHLETS

AR 190-11	Physical Security of Arms, Ammunition, and Explosives
DA PAM 738-750	The Army Maintenance Management System (TAMMS)

A-6. FORMS

DA FORM 2028	Recommended Changes to Publications and Blank Forms.
DA FORM 2408-4	Weapons Record Data Card
DD FORM 1387	Military Shipment Label
SF 368	Quality Deficiency Report

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The maintenance allocation chart (MAC) in Section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS. Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item, through examination, by comparing its physical, mechanical, and/or electrical characteristics with established standards.

b. Test. To verify serviceability by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services - inspect, test, service, adjust, aline, calibrate, or replace - or other maintenance actions, welding, grinding, riveting, straightening, facing, remachining, or resurfacing to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II.

a. Column 1. Group Number. Column lists functional group codes, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2. Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3. Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2).

d. Column 4. Maintenance Category. Column 4 specifies, by the listing of work-time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work-time figures will be shown for each category. The work-time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific task identified for the maintenance function authorized in the maintenance allocation chart. Symbol designations for the various maintenance categories are as follows:

C ....Operator or crew.
O ....Organizational maintenance.
F ....Direct support maintenance.
H ....General support maintenance.
D...............................Depot maintenance.

e. Column 5. Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6. Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III.

a. Column 1. Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

b. Column 2. Maintenance Category. The lowest category of maintenance authorized to use the tool or test equipment.

c. Column 3. Nomenclature. Name or identification of the tool or test equipment.

d. Column 4. National Stock Number (NSN). The National stock number of the tool or test equipment; Tool Number, the manufacturer's part number.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

a. Column 1. Reference Code. The code recorded in column 6, Section II.

b. Column 2. Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

Section II. MAINTENANCE ALLOCATION CHART FOR M242 GUN

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAIN-TENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
BTASG	GUN, 25MM, M242, AUTOMATIC	INSPECT	.00	.32	1.71	.00	.91		
		TEST	.00	.36	.36	.00	.00		
		SERVICE	.90	.00	.00	.00	.00		
		INSTALL	.30	.00	.00	.00	.00		
		REMOVE/ REPLACE	.00	.64	.00	.00	.00	0001	
BTASGA	BARREL ASSEMBLY	INSPECT	.00	.15	.43	.00	.00		
		SERVICE	.17	.00	.00	.00	.00		
		INSTALL	.24	.00	.00	.00	.00	0014	
		REMOVE/ REPLACE	.00	.45	.00	.00	.00	0014	
		REPAIR	.00	1.30	.00	.00	.00	0001	
BTASGB	FEEDER ASSEMBLY	INSPECT	.00	1.00	.00	.00	.00	0001 0003	
		SERVICE	.16	.00	.00	.00	.00		
		INSTALL	.13	.00	.00	.00	.00		
		REMOVE/ REPLACE	.00	.13	.00	.00	.00	0001 0005	
		REPAIR	.00	.67	.00	.00	.00	0001	
BTASGBA	DRIVE ASSEMBLY, FEEDER	REPAIR	.00	.47	.46	.00	.00	0001 0004 0006 0016	
BTASGBAB	REAR PLATE ASSEMBLY	REMOVE/ REPLACE	.00	.00	.75	.00	.00	0006 0016	
		REPAIR	.00	.00	.33	.00	.00	0006 0015 0016	
BTASGBABA	FEED PLATE ASSEMBLY	REPAIR	.00	.00	.20	.00	.00	0006 0008 0015 0016 0007	

Section II. MAINTENANCE ALLOCATION CHART FOR M242 GUN (cont)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAIN-TENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
BTASGBAD	FEED SHAFT STOP ASSEMBLY	REMOVE/ REPLACE	.00	.00	.12	.00	.00	0006 0016	
		REPAIR	.00	.00	.22	.00	.00	0006 0016	
BTASGBAE	CLUTCH ASSEMBLY, LOWER	REMOVE/ REPLACE	.00	.00	.41	.00	.00	0006 0016	
		REPAIR	.00	.00	.22	.00	.00	0006 0016	
BTASGBAF	CLUTCH ASSEMBLY, UPPER	REMOVE/ REPLACE	.00	.00	.41	.00	.00	0006 0016	
		REPAIR	.00	.00	.22	.00	.00	0006 0016	
BTASGBAI	GEAR CLUTCH ASSEMBLY	REPAIR	.00	.00	.30	.00	.00	0006 0016 0009 0019	
BTASGBAJ	HOUSING ASSEMBLY, FEEDER	REMOVE/ REPLACE	.00	.00	2.48	.00	.00	0006 0008	
		REPAIR	.00	.00	.75	.00	.00	0006 0008 0016 0015	
BTASGBAN	COVER ASSEMBLY, INDEX DRIVE	REMOVE/ REPLACE	.00	.00	.20	.00	.00	0006 0016	
		REPAIR	.00	.00	.45	.00	.00	0006 0016	
BTASGBD	FEED ASSEMBLY, FORWARD	REMOVE/ REPLACE	.00	.84	.00	.00	.00	0001	
		REPAIR	.00	.00	.23	.00	.00	0006 0007 0008 0016	
BTASGBG	POSITIONER ASSEMBLY, ROUND	REPAIR	.00	.22	.00	.00	.00	0001	
		INSTALL		.22				0001	

Section II. MAINTENANCE ALLOCATION CHART FOR M242 GUN (cont)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAIN-TENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
BTASGC	RECEIVER ASSEMBLY, GUN	INSPECT	.00	.35	.00	.00	.00		
		SERVICE	.35	.00	.00	.00	.00		
		INSTALL	.31	.00	.00	.00	.00		
		REPAIR	.00	.81	.00	.00	.00	0001 0004 0008 0015 0019	
BTASGCB	BOLT AND TRACK ASSEMBLY	INSPECT		.25					
		SERVICE	.25	.00	.00	.00	.00		
		INSTALL	.13	.00	.00	.00	.00		
		REPAIR	.00	.33	.00	.00	.00	0001	
BTASGCBA	BOLT AND CARRIER ASSEMBLY	INSPECT		.30					
		SERVICE	.30	.00	.00	.00	.00		
		INSTALL	.18	.00	.00	.00	.00		
		REPAIR	.12	.12	.00	.00	.00	0001	
BTASGCBB	TRACK ASSEMBLY	SERVICE	.28	.22	.00	.00	.00		
		INSTALL	.16	.00	.00	.00	.00		
		REPAIR	.00	.31	.00	.00	.00	0001	
BTASGCC	RECOIL MECHANISM	INSPECT	.05	.08	.00	.00	.00		
		SERVICE	.00	.20	.00	.00	.00	0001	
		REMOVE/ REPLACE	.00	.76	.00	.00	.00	0001 0021 0026	
		REPAIR	.00	.00	.75	.00	.00	0006 0011 0012 0013 0016 0021	
BTASGCCA	DAMPER ASSEMBLY	REPAIR	.00	.00	.66	.00	.00	0006 0010 0016 0018 0027 0028	

Section II. MAINTENANCE ALLOCATION CHART FOR M242 GUN (cont)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAIN-TENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
BTASGCE	CLUTCH ASSEMBLY	REPAIR	.00	.08	.00	.00	.00	0001	
BTASGCJ	SEAR ASSEMBLY	REPAIR	.00	.00	.09	.00	.00	0006 0016	
		INSTALL		.79				0001	
BTASGCL	RIVETED RECEIVER	REPAIR	.00	.00	.50	.00	.00	0006 0016 0018	
BTASGCM	MOTOR, 1.5 HP D.C.	TEST	.00	.00	1.03	.00	.00	0020	
		REMOVE/ REPLACE	.00	.86	.00	.00	.00	0001	
		REPAIR	.00	.00	1.45	.00	.00	0017	
BTASGCMA	YOKE ASSEMBLY, 1.5 HP, DR	REMOVE/ REPLACE	.00	.00	1.45	.00	.00	0006 0016	
		REPAIR	.00	.00	1.05	.00	.00	0017	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR M242 GUN

(1) TOOL OR TEST EQUIPMENT REF GUIDE	(2) MAIN-TENANCE CATEGORY	(3) NOMENCLATURE	(4) NSN/TOOL NUMBER
1	O	TOOL KIT, TURRET MECHANIC, FVS AND ITV 45T, ORGANIZATIONAL SUPPORT	NSN: 5180-01-115-5351 TOOL: SC 5180-95CLB19
2	O	MULTIMETER (WHEN SUPPLIES OF AN/URM 105C BECOME EXHAUSTED, ORDER AN/PSN-45)	NSN: 6625-00-999-6282 TOOL: ANURM 105C NSN: 6625-01-139-2512 TOOL: AN/PSN-45
3	O	DUMMY CARTRIDGE	NSN: 1305-01-105-4095 TOOL: 9341746
4	O	MECHANICAL PULLER (OUTSIDE)	NSN: 5120-00-595-9304 TOOL: GGG781
5	O	HAND CRANK ASSEMBLY (19200)	NSN: 1005-01-119-7269 TOOL: 12524015
6	F	SMALL ARMS REPAIRER TOOL KIT	NSN: 4933-00-357-7770 TOOL: SC 4933-95CLA07
7	F	BUSHING DRIVER SET	NSN: 5120-00-121-3866 TOOL: A157A
8	O	MECHANICAL PULLER (INSIDE)	NSN: 5120-00-449-3769 TOOL: GGGP00781
9	F	22-MM CROWFOOT WRENCH	NSN: 5120-01-074-7558 TOOL: FCOM22
10	O	1-1/4-IN. CROWFOOT WRENCH	NSN: 5120-00-184-8411 TOOL: FC 46
11	F	RECOIL SPRING COMPRESSION TOOL (19200)	NSN: 1005-01-130-5696 TOOL: 12524027
12	F	ALIGNER ASSEMBLY (19200)	NSN: 1005-01-119-7254 TOOL: 12524021
13	F	SPANNER WRENCH (19200)	NSN: 5120-01-119-7240 TOOL: 12524483

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR M242 GUN (cont)

(1) TOOL OR TEST EQUIPMENT REF GUIDE	(2) MAIN-TENANCE CATEGORY	(3) NOMENCLATURE	(4) NSN/TOOL NUMBER
14	O	HEAT MITTENS	NSN: 8415-01-092-0039 TOOL: HH-M-391
15	F	ARBOR PRESS	NSN: 3444-00-243-2654 TOOL: 00-P-636
16	F	SMALL ARMS REPAIRER TOOL KIT	NSN: 4933-00-854-0664 TOOL: SC 4933-95CLA11
17	F	FUEL AND ELECTRICAL REPAIRER TOOL KIT	NSN: 4910-00-754-0714 TOOL: SC 4910-95CLA01
18	F	REPAIR KIT, INSERT (19200)	NSN: 4933-01-153-2795 TOOL: 12524035
19	F	GEAR CLUTCH TOOL	NSN: 5120-01-153-2794 TOOL: 12524031
20	F	TEST CONNECTOR ASSEMBLY	NSN: 4933-01-153-2796 TOOL: 12524032
21	O	PACKING EXTRACTOR KIT	NSN: 5120-01-021-7381 TOOL: 887-200
22	F	MACHINIST SHOP SET	NSN: 4920-00-405-9279 TOOL: SC4920-99-CL-A91
23	O	12MM COMBINATION WRENCH	NSN: 5120-01-113-6285 TOOL: OEXM120
24	O	19MM COMBINATION WRENCH	NSN: 5120-01-113-6291 TOOL: OEXM190
25	O	32MM COMBINATION WRENCH	NSN: 5120-01-113-6295 TOOL: OEXM32
26	O	32MM CROWFOOT WRENCH	NSN: TOOL: FCOM32
27	F	ADAPTER FITTING	NSN: TOOL: 12524126
28	F	HOSE	NSN: 4720-00-356-8577 TOOL: V2130D

Reference
Code

Section IV. REMARKS

Remarks

APPENDIX C

ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Current as of

Section I. INTRODUCTION

C-1. SCOPE.

This appendix lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of organizational maintenance of the gun. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. GENERAL.

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence. Bulk materials are listed in NSN sequence.

b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. EXPLANATION OF COLUMNS.

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure number of the illustration on which the item is shown.

(2) Item Number. The number used to identify item called out in the illustration.

b. Source, Maintenance, and Recoverability (SMR) Codes.

(1) Source Code. Source code indicates the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

C-3. EXPLANATION OF COLUMNS (cont)

Code	Definition
PA --	Item procured and stocked for anticipated or known usage.
PB --	Item procured and stocked for insurance purpose because essent dictates that a minimum quantity available in the supply system.
PC --	Item procured and stocked and wh otherwise would be coded PA exce that it is deteriorative in natu
PD --	Support item, excluding support equipment, procured for initial or outfitting and stocked only f subsequent or additional initial issues or outfittings. Not subj to automatic replenishment.
PE --	Support equipment procured and s for initial issue or outfitting specified maintenance repair act
PF --	Support equipment which will not stocked but which will be centra procured on demand.
PG --	Item procured and stocked to pro for sustained support for the li the equipment. It is applied to item peculiar to the equipment w because of probable discontinuan shutdown of production facilitie would prove uneconomical to repr at a later time.
KD --	An item of a depot overhaul/repa and not purchased separately. D

Code	Definition
	defined as a kit that provides items required at the time of overhaul or repair.
KF	--An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
KB	--Item included in both a depot overhaul/repair kit and a maintenance kit.
MO	--Item to be manufactured or fabricated at organizational level.
MF	--Item to be manufactured or fabricated at the direct support maintenance level.
MH	--Item to be manufactured or fabricated at the general support maintenance level.
MD	--Item to be manufactured or fabricated at the depot maintenance level.
AO	--Item to be assembled at organizational level.
AF	--Item to be assembled at direct support maintenance level.
AH	--Item to be assembled at general support maintenance level.
AD	--Item to be assembled at depot maintenance level.

C-3. EXPLANATION OF COLUMNS (cont)

Code	Definition
XA	--Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB	--Item is not procured or stocked. If not available through salvage, requisition.
XC	--Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD	--A support item that is not stocked. When required, item will be procured through normal supply channels.

NOTE: Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	Application/Explanation
C	--Crew or operator maintenance performed within organizational maintenance.
O	--Support item is removed, replaced, used at the organizational level.
F	--Support item is removed, replaced, used at the direct support level.
H	--Support item is removed, replaced, used at the general support level.
D	--Support items that are removed, replaced, used at depot, mobile depot, or specialized repair activity only.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	--The lowest maintenance level capable of complete repair of the support item is the organizational level.
F	--The lowest maintenance level capable of complete repair of the support item is the direct support level.

C-3. EXPLANATION OF COLUMNS (cont)

Code Definition

H --The lowest maintenance level capable of complete repair of the support item is the general support level.

D --The lowest maintenance level capable of complete repair of the support item is the depot level.

L --Repair restricted to (enter applicable designated specialized repair activity) Specialized Repair Activity.

Z --Nonreparable. No repair is authorized.

B --No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this area.

(3) Recoverability Code.

Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability Codes Definition

Z --Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.

Recoverability Codes Definition

O --Reparable item. When uneconomically reparable, condemn and dispose at organizational level.

F --Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.

H --Reparable item. When uneconomically reparable, condemn and dispose at the general support level.

D --Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.

L --Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.

A --Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

C-3. EXPLANATION OF COLUMNS (cont)

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE: When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item. Items that are included in kits and sets are listed below the name of the kit or set with the quantity of each item, in the kit or set indicated in the quantity incorporated in unit column. When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description. In the Special Tools List, the initial basis of issue (BOI) appears as the last line in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased accordingly.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc.).

C-4. SPECIAL INFORMATION.

a. Detailed assembly instructions for items source coded to be assembled are found in the maintenance instructions of this manual. Assembly components are listed immediately following the item to be asssembled.

C-4. SPECIAL INFORMATION (cont)

b. The illustrations in this appendix are identical to those published in TM 9-1005-200-30&P. Only those parts assigned the third position SMR maintenance code "O" are listed in the tabular listing; therefore, there may be a break in the item number sequence. Only illustrations containing organizational authorized items appear in this manual.

c. The barrel is not repairable and will not be illustrated in a separate figure.

C-5. HOW TO LOCATE REPAIR PARTS

a. When National Stock Number or Part Number is Unknown:

(1) First. Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups, and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional group to which the item belongs.

(3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) Fourth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

Section II. REPAIR PARTS LIST

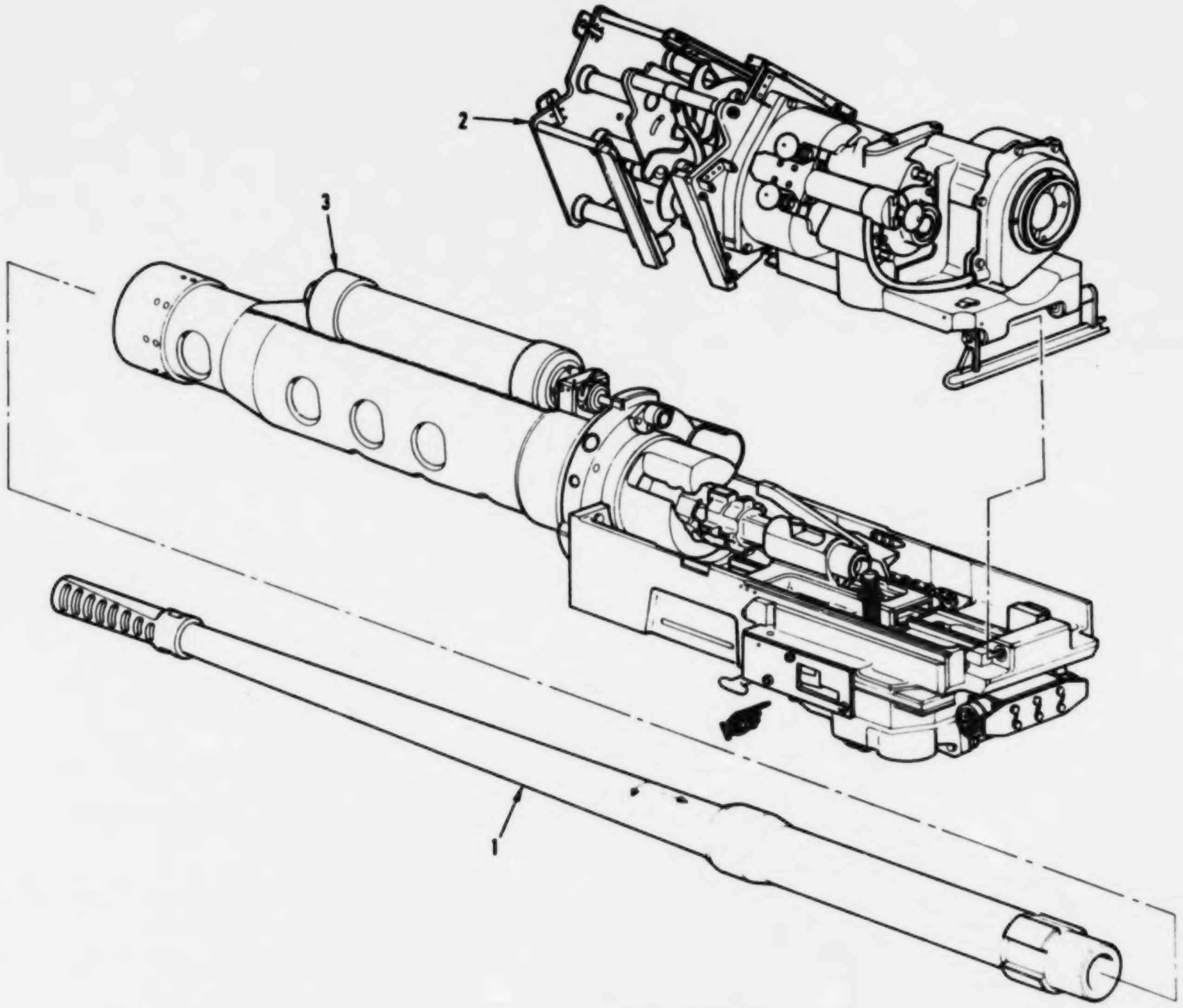


Figure 1. Gun, automatic, 25-mm, M242, 12524008.

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASG - GUN, AUTOMATIC, 25-MM, M242, 12524008		
1	1	PAOOA	1005-01-088-4359	12524001	19200	BARREL ASSEMBLY	EA	1
1	2	PAOFF	1005-01-105-5191	12524100	19200	FEEDER ASSEMBLY	EA	1
1	3	XAOFD		12524300	19200	RECEIVER ASSEMBLY	EA	1

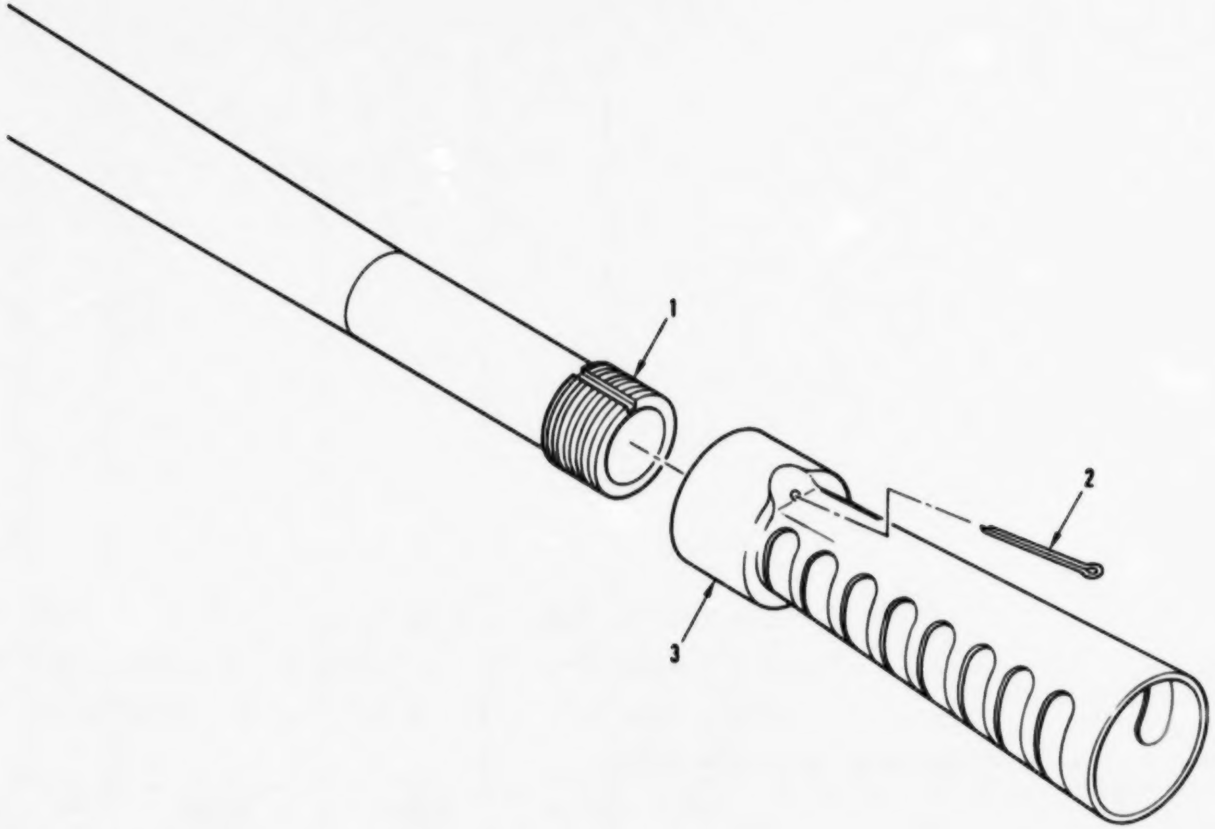


Figure 2. Barrel assembly, 25-mm, 12524001.

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASGA - BARREL ASSEMBLY, 25MM, 12524001		
2	1	XAOZZ		12524002	19200	BARREL, 25MM	EA	1
2	2	PAOZZ		12524641	19200	PIN, COTTER	EA	1
2	3	PBOZZ		12524004	19200	BRAKE, MUZZLE	EA	1

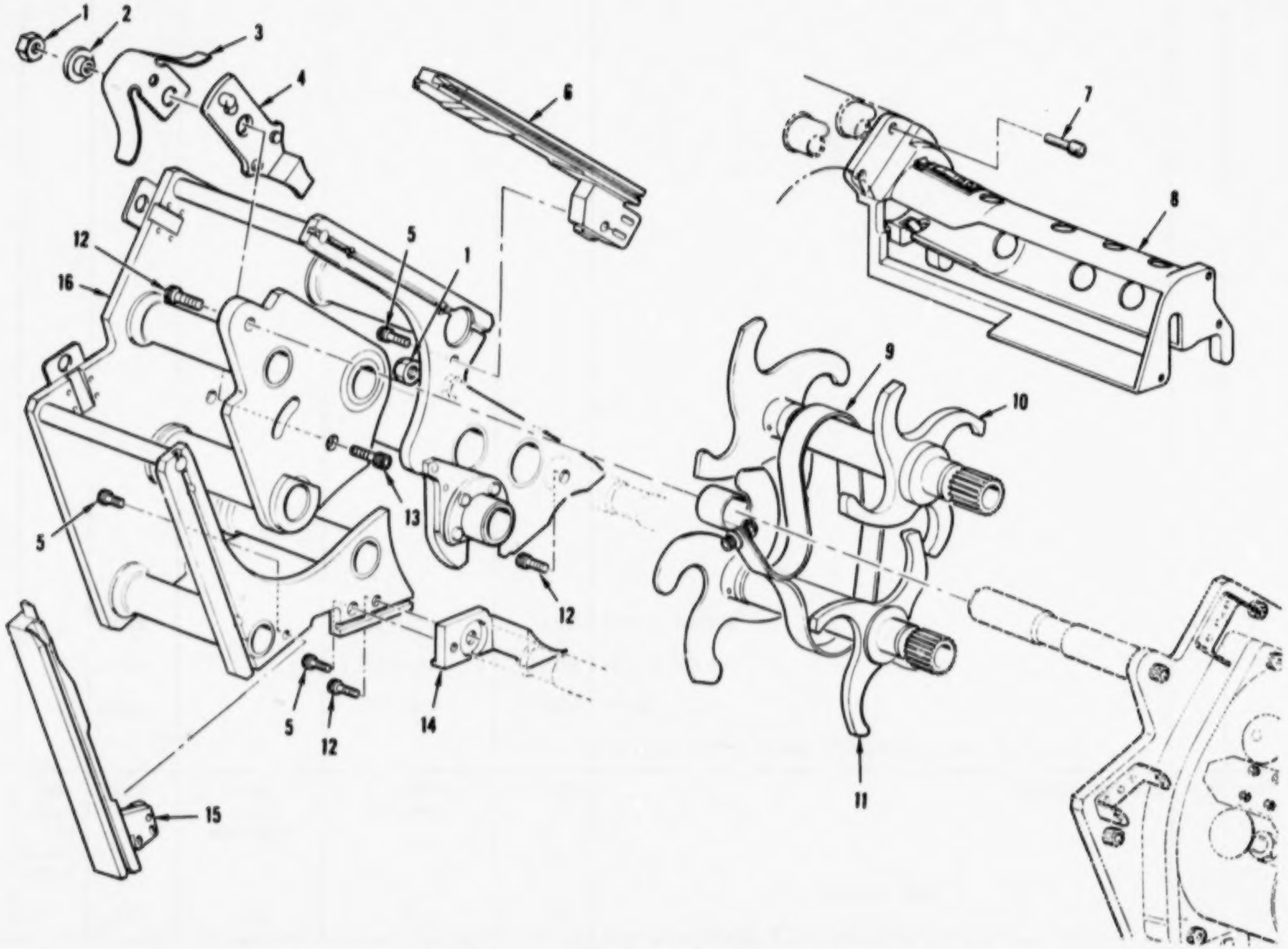

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Figure 3. Feeder assembly 12524100 (page 1 of 2).

Section II. REPAIR PARTS LIST (cont)

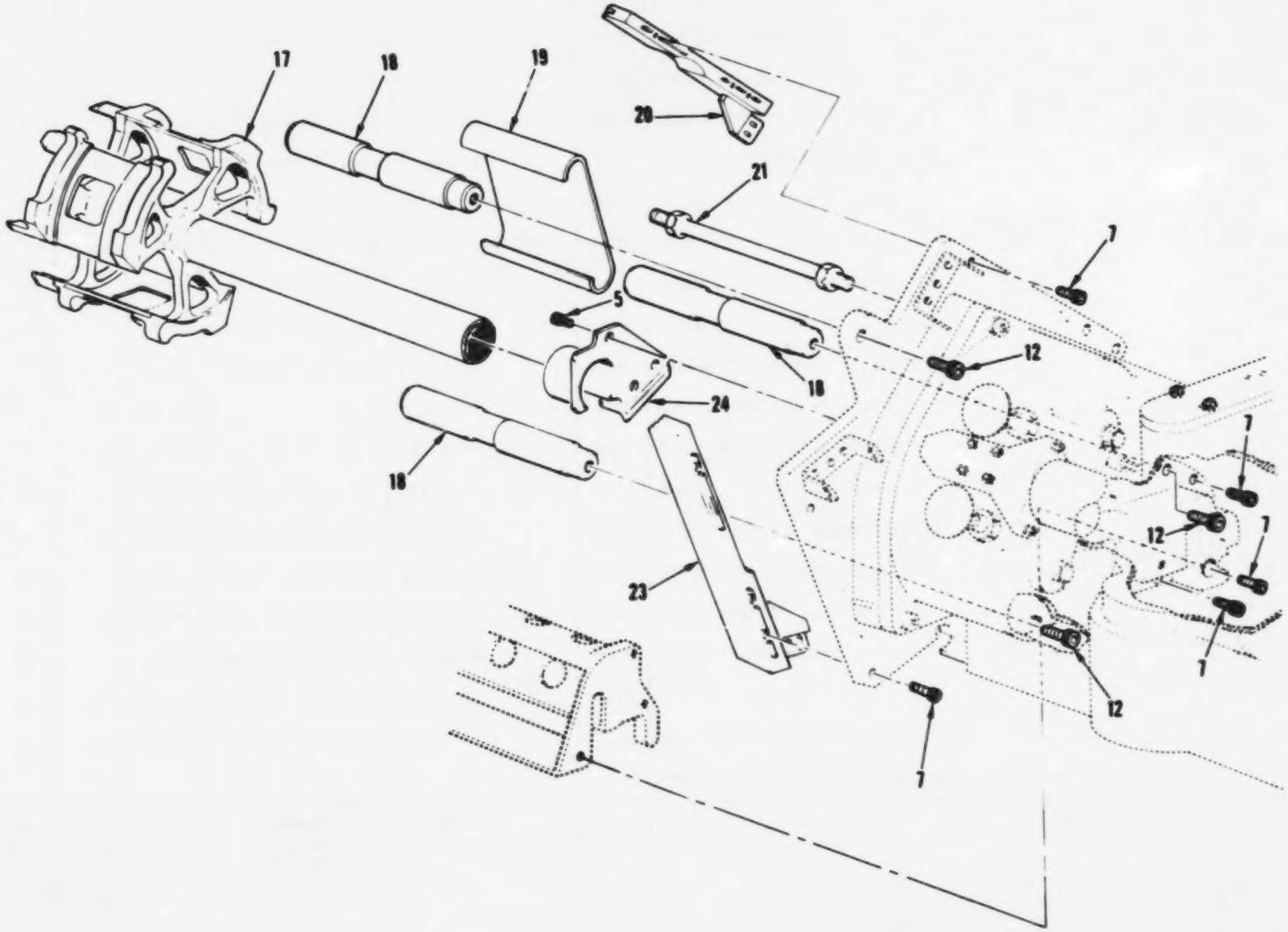
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Figure 3. Feeder assembly 12524100 (page 2 of 2).

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASGB - FEEDER ASSEMBLY 12524100		
3	1	PAOZZ	5310-01-115-0756	12524617-1	19200	NUT, SELF-LOCKING, HEXAGON	EA	2
3	2	PAOZZ	5365-01-128-5675	12524137	19200	SPACER, GATE	EA	1
3	3	PAOZZ	1005-01-114-3080	12524138	19200	SPRING, FORWARD GATE	EA	1
3	4	PAOZZ	1005-01-088-4363	12524134	19200	GATE, FEEDER, FORWARD	EA	1
3	5	PAOZZ	5305-01-122-9633	B18-3-1AH060012D	56878	SCREW, CAP, SOCKET HEAD	EA	6
3	6	PAOZZ	1005-01-153-2790	12524066	19200	LINK STRIPPER, FORWARD UPPER	EA	1
3	7	PAOZZ	5305-01-122-9634	B18-3-1AH060020D	56878	SCREW, CAP, SOCKET HEAD	EA	18
3	8	PAOZZ	1005-01-089-7856	12524110	19200	CHUTE ASSEMBLY, EJECTION	EA	1
3	9	AOOOO		12524160	19200	POSITIONER ASSEMBLY, ROUND	EA	1
3	10	PAOZZ	1005-01-088-4366	12524155	19200	SPROCKET ASSEMBLY, UPPER FEED	EA	1
3	11	PAOZZ	1005-01-088-4365	12524150	19200	SPROCKET ASSEMBLY, LOWER FEED	EA	1
3	12	PAOZZ	5305-01-122-9635	B18-3-1AH080030D	56878	SCREW, CAP, SOCKET HEAD	EA	6
3	13	PAOZZ	5305-01-124-7057	B18-3-1AH060025D	56878	SCREW, CAP, SOCKET HEAD	EA	1
3	14	PAOZZ	1005-01-089-7870	12524102	19200	GUIDE, CARTRIDGE	EA	1
3	15	PAOZZ	1005-01-153-2791	12524067	19200	LINK STRIPPER, FORWARD LOWER	EA	1
3	16	PAOFF	1005-01-089-7784	12524120	19200	FEED ASSEMBLY, FORWARD	EA	1
3	17	PAOZZ	1005-01-088-4364	12524140	19200	ROTOR ASSEMBLY	EA	1
3	18	PAOZZ	5365-01-089-7779	12524136	19200	SPACER, STEPPED	EA	3
3	19	PAOZZ	1005-01-119-9819	12524103	19200	SHIELD, LINK	EA	1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASGB - FEEDER ASSEMBLY 12524100		
3	20	PAOZZ	1005-01-088-4368	12524065	19200	LINK STRIPPER, REAR UPPER	EA	1
3	21	PAOZZ	1005-01-088-4361	12524115	19200	STANDOFF, FEEDER	EA	1
3	23	PAOZZ	1005-01-153-2792	12524068	19200	LINK STRIPPER, REAR LOWER	EA	1
3	24	PAOZZ	1005-01-088-4362	12524116	19200	GUIDE, EJECT, UPPER	EA	1

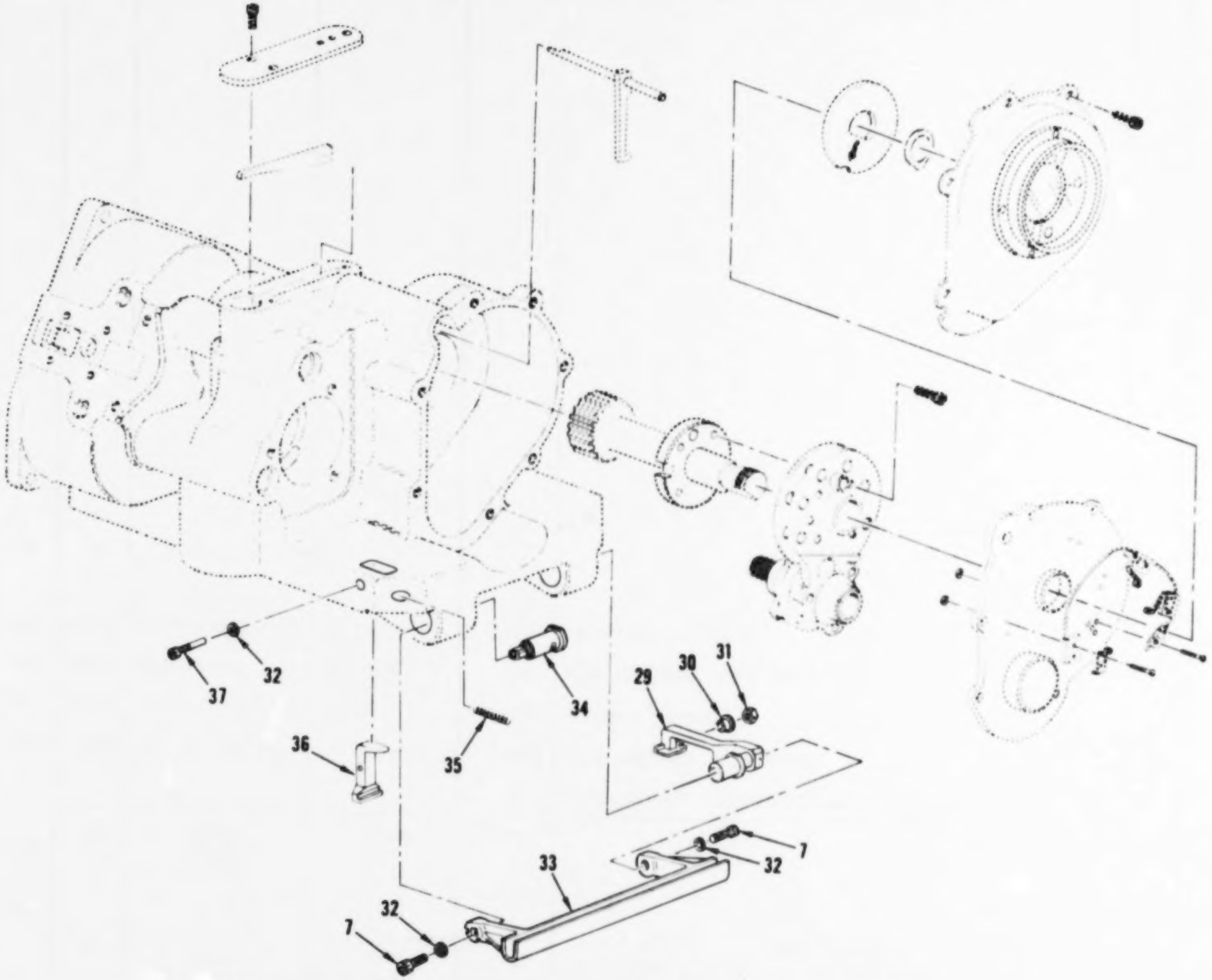
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Figure 4. Drive assembly, feeder 12524180 timing.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP BTASGBA - DRIVE ASSEMBLY, FEEDER 12524180 TIMING		
4	7	PAOZZ	5305-01-122-9633	B18-3-1AH060012D	56878	SCREW, CAP, SOCKET HEAD	EA	2
4	29	PAOZZ	1005-01-088-4402	12524280	19200	BUSHING ASSEMBLY, SLOTTED	EA	1
4	30	PAOZZ	5365-01-089-7735	12524474	19200	SPACER	EA	2
4	31	PAOZZ	5310-00-982-5000	MS21045-C04	96906	NUT	EA	2
4	32	PAOZZ	5310-00-209-0027	MS20002-4	96906	WASHER	EA	3
4	33	PAOZZ	1005-01-088-4395	12524208	19200	HANDLE, FEEDER	EA	1
4	34	PAOZZ	1005-01-088-4401	12524275	19200	BUSHING ASSEMBLY, CAM	EA	1
4	35	PAOZZ	5360-00-407-8538	MS24585-1136	96906	SPRING, HELICAL, COMPRESSION	EA	1
4	36	PAOZZ	1005-01-088-4375	12524228	19200	LATCH, FEEDER HANDLE	EA	1
4	37	PAOZZ	5305-01-089-7718	12524189	19200	SETSCREW	EA	1

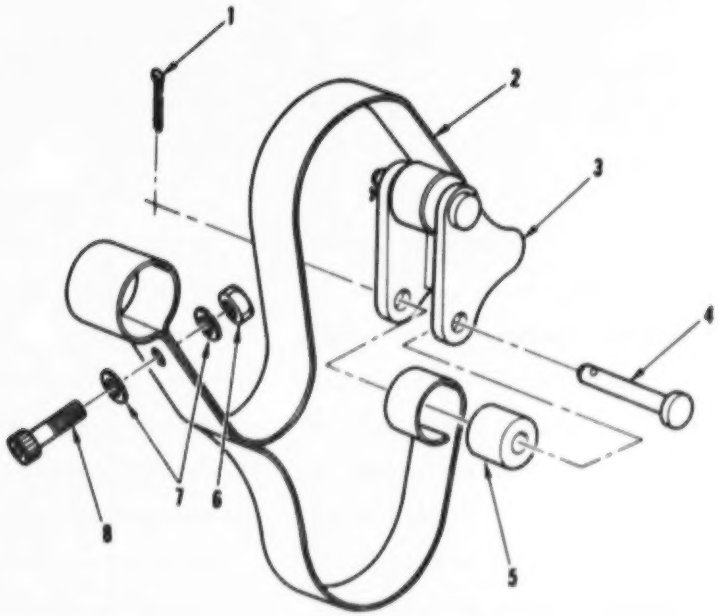

Figure 5. Positioner assembly, round 12524160.

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASGBG - POSITIONER ASSEMBLY, ROUND 12524160		
5	1	PAOZZ	5315-01-027-6616	MS24665-132	96906	PIN, COTTER	EA	2
5	2	PAOZZ	5360-01-095-5212	12524162	19200	SPRING, FLAT	EA	1
5	3	PAOZZ	1005-01-088-4367	12524163	19200	POSITIONER, ROUND	EA	1
5	4	PAOZZ	5315-00-770-9181	MS20392-3C39	96906	PIN, STRAIGHT, HEADED	EA	2
5	5	PAOZZ	3120-01-089-7727	12524161	19200	BUSHING, SLEEVE	EA	2
5	6	PAOZZ	5310-01-115-0756	12524617-1	19200	NUT, SELF-LOCKING, HEXAGON	EA	1
5	7	PAOZZ	5310-00-209-0027	MS20002-4	96906	WASHER	EA	2
5	8	PAOZZ	5305-01-122-9633	B18-3-1AH060012D	56878	SCREW, CAP, SOCKET HEAD	EA	1

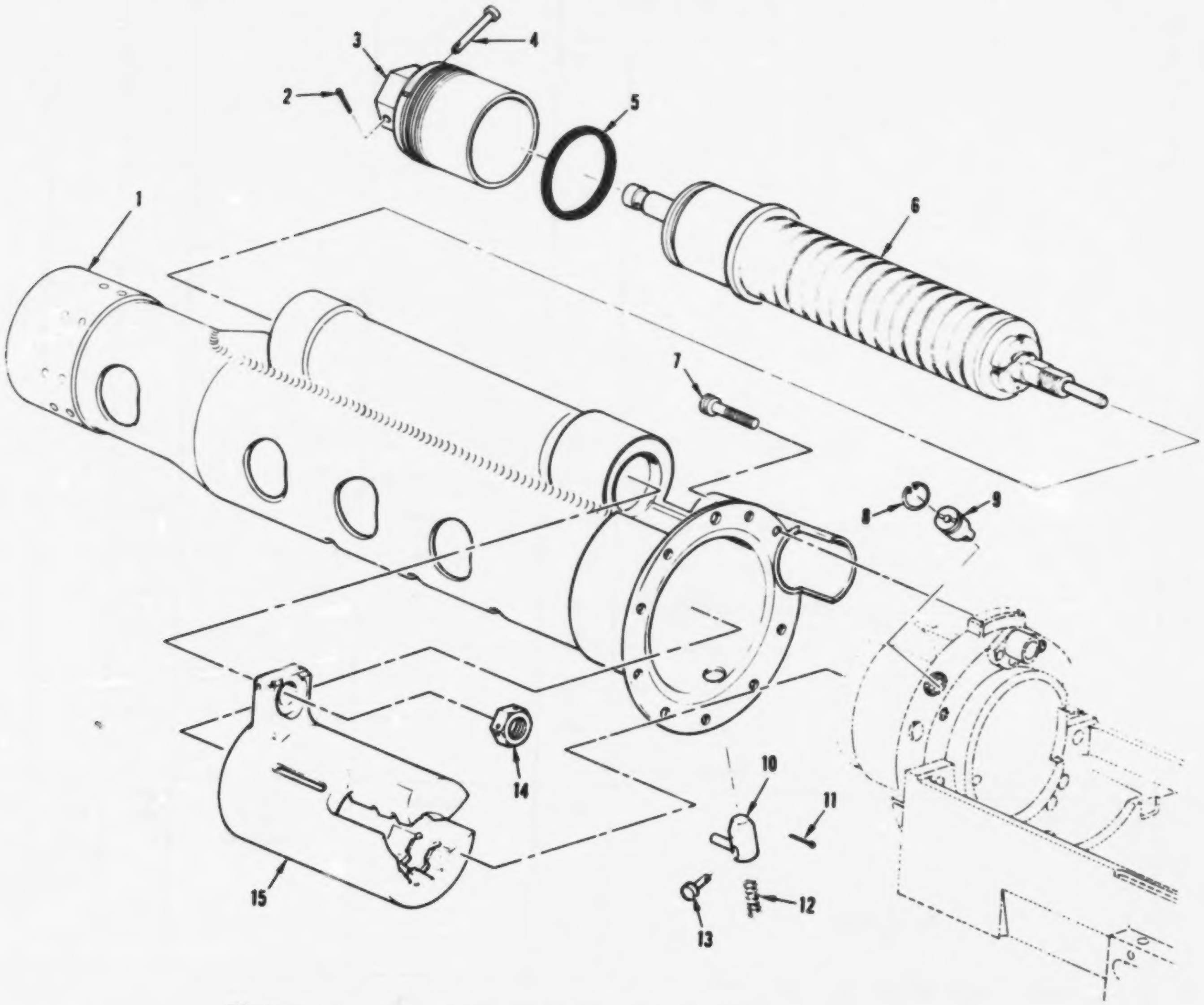
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Figure 6. Receiver assembly 12524300 (page 1 of 4).

Section II. REPAIR PARTS LIST (cont)

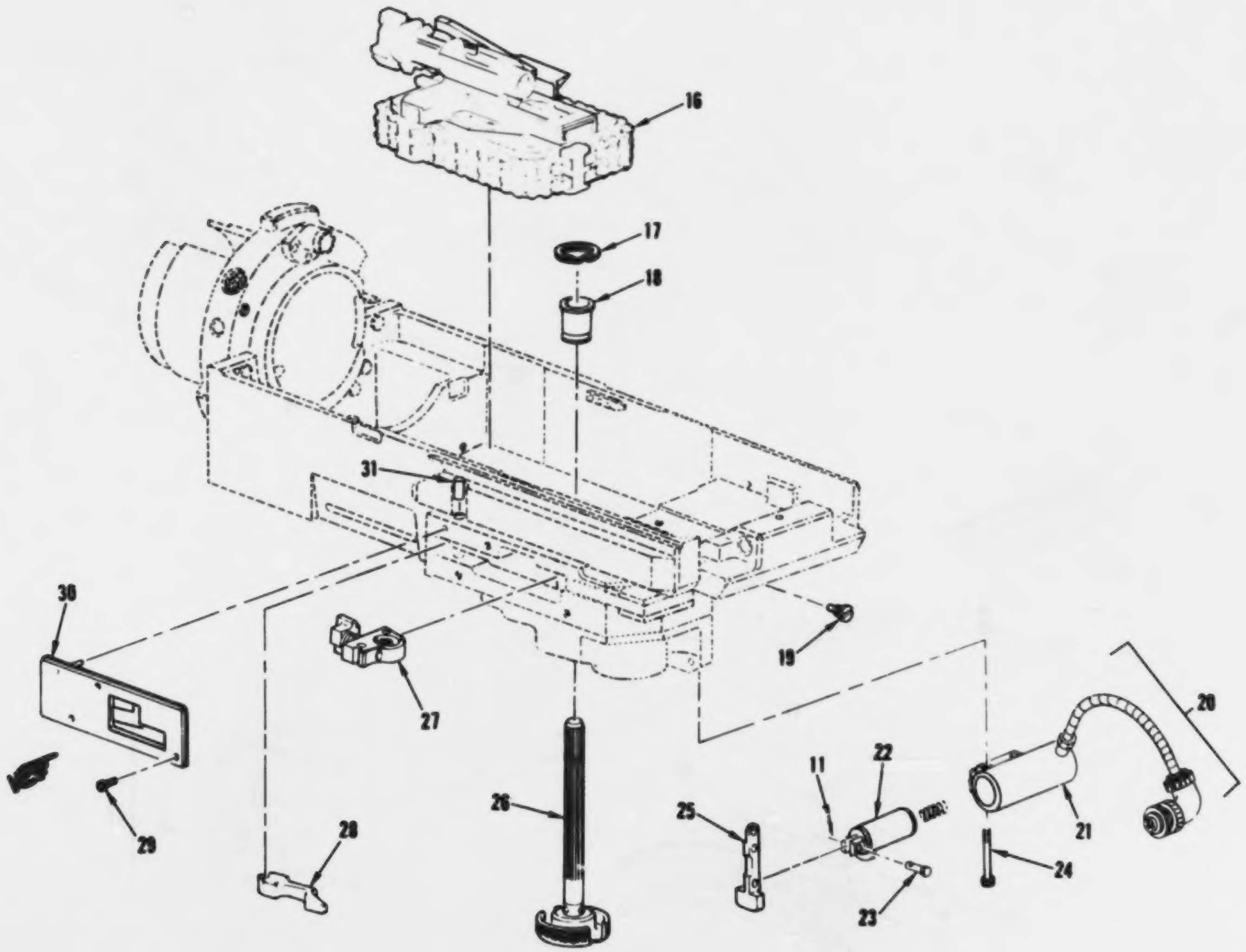
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Figure 6. Receiver assembly 12524300 (page 2 of 4).

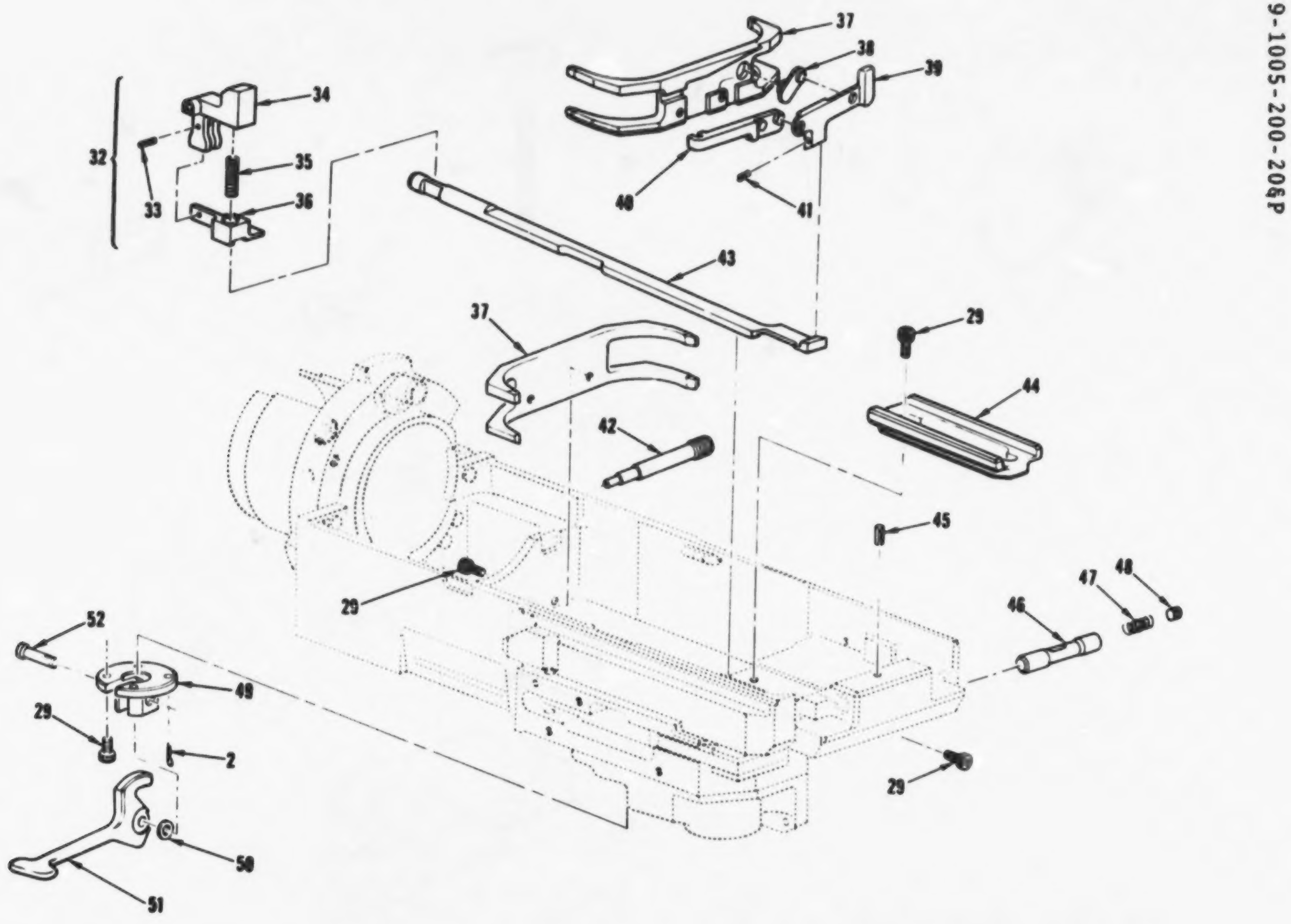
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Figure 6. Receiver assembly 12524300 (page 3 of 4).

Section II. REPAIR PARTS LIST (cont)

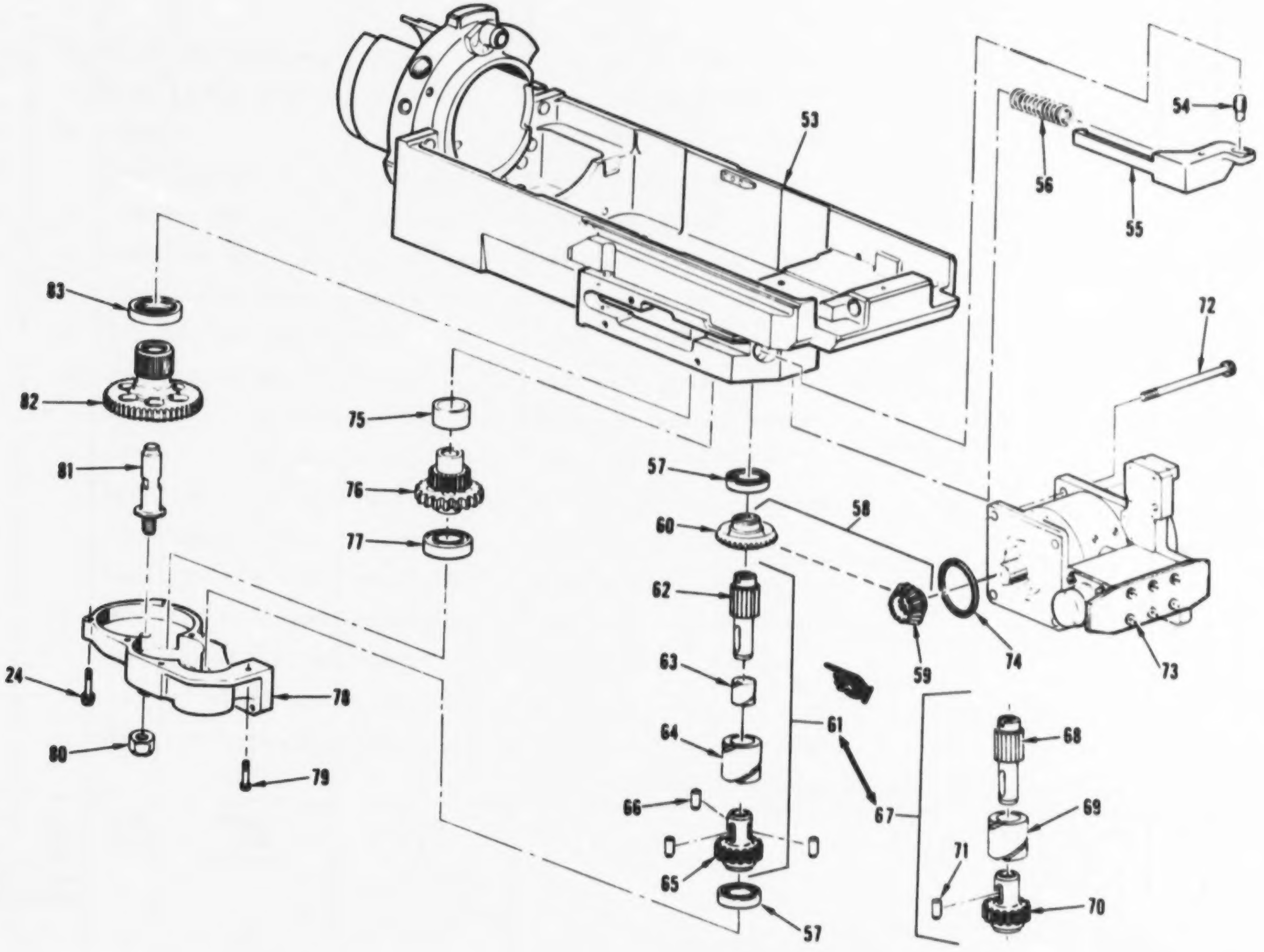
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Figure 6. Receiver Assembly 12524300 (page 4 of 4).

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP BTASGC - RECEIVER ASSEMBLY 12524300		
6	1	PBOZZ	1005-01-114-0081	12524350	19200	BARREL SUPPORT ASSEMBLY	EA	1
6	2	PAOZZ	5315-00-842-3044	MS24665-283	96906	PIN, COTTER	EA	2
6	3	PAOZZ	1005-01-088-4388	12524422	19200	CAP, HOUSING RECOIL	EA	1
6	4	PAOZZ	5315-00-903-5944	MS20392-4C41	96906	PIN, STRAIGHT, HEADED	EA	1
6	5	PAOZZ	5330-00-935-2027	NAS1611-326	80205	PACKING, PREFORMED O-RING	EA	1
6	6	PAOFF	1005-01-088-4387	12524420	19200	RECOIL MECHANISM	EA	1
6	7	PAOZZ	5305-01-122-9635	B18-3-1AH080030D	56878	SCREW, CAP, SOCKET HEAD	EA	9
6	8	PAOZZ	5365-00-807-7968	MS16625-1068	96906	RING, RETAINING	EA	1
6	9	PAOZZ	5315-01-089-7672	12524305	19200	KEY, MACHINE, BREECH	EA	1
6	10	PAOZZ	1005-01-089-7770	12524343	19200	PIN, BARREL LOCK	EA	1
6	11	PAOZZ	5315-01-027-6616	MS24665-132	96906	PIN, COTTER	EA	2
6	12	PAOZZ	5360-00-182-9953	MS24585-1281	96906	SPRING, HELICAL, COMPRESSION	EA	1
6	13	PAOZZ	5315-00-770-9181	MS20392-3C39	96906	PIN, STRAIGHT, HEADED	EA	1
6	14	PAOZZ	5310-01-091-3309	12524379	19200	NUT, DAMPER	EA	1
6	15	PAOZZ	1005-01-114-0080	12524370	19200	BREECH ASSEMBLY	EA	1
6	16	A0000		12524340	19200	BOLT AND TRACK ASSEMBLY	EA	1
6	17	PAOZZ	5365-01-139-4490	M27426-2105D	81349	RING, RETAINING	EA	1
6	18	PAOZZ	1005-01-097-0252	12524359	19200	SLEEVE, PIVOT - SEAR	EA	1

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0TASGC - RECEIVER ASSEMBLY 12524300		
6	19	PAOZZ	5305-01-089-7667	12524358	19200	LINKAGE, PIN, SEAR	EA	1
6	20	A0000		12524419	19200	SOLENOID, ELECTRICAL SEAR	EA	1
6	21	PAOZZ	1005-01-203-2721	12524419-1	19200	. . . BODY, SEAR, SOLENOID	EA	1
6	22	PAOZZ	1005-01-203-2720	12524419-2	19200	. . . PLUNGER, SEAR SOLENOID **NOTE**: Must also install P/N 12524166 and P/N 12524165	EA	1
6	23	PAOZZ	5315-00-990-1338	MS20392-2C19	96906	PIN, STRAIGHT, HEADED	EA	1
6	24	PAOZZ	5305-01-122-9637	B18-3-1AH060035D	56878	SCREW, CAP, SOCKET HEAD	EA	6
6	25	PAOZZ		12524166	19200	SEAR, RELEASE, LINK	EA	1
6	26	PAOZZ	1005-01-089-7789	12524302	19200	DRIVE SHAFT	EA	1
6	27	PAOFF	1005-01-170-1982	12524089	19200	SEAR ASSEMBLY	EA	1
6	28	PAOZZ	1005-01-167-8331	12524070	19200	CATCH ASSEMBLY, CHAIN SEAR	EA	1
6	29	PAOZZ	5305-01-122-9633	B18-3-1AH060012D	56878	SCREW, CAP, SOCKET HEAD	EA	13
6	30	PAOZZ	1005-01-088-4382	12524107	19200	COVER ASSEMBLY, SEAR	EA	1
6	31	PAOZZ	5315-01-157-3064	12524619-6	19200	PIN, STRAIGHT, HEADLESS	EA	1
6	32	A0000		12524463	19200	ROCKER ASSEMBLY	EA	1
6	33	PAOZZ	5315-01-115-0899	12524618-1	19200	. . . PIN, SPRING	EA	1
6	34	PAOZZ	1005-01-119-7253	12524466	19200	. . . ROCKER	EA	1
6	35	PAOZZ	5360-01-114-0185	12524628-7	19200	. . . SPRING, HELICAL, COMPRESSION	EA	1
6	36	PAOZZ	1005-01-119-7252	12524465	19200	. . . HOUSING, ROCKER SPRING	EA	1
6	37	PAOZZ	1005-01-088-4381	12524085	19200	GUIDE, CHAIN	EA	1

(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASGC - RECEIVER ASSEMBLY 12524300		
6	38	PAOZZ	1005-01-114-0082	12524461	19200	CRANK, INTERLOCK	EA	1
6	39	PAOZZ	1005-01-114-0083	12524433	19200	EXTENSION, PUSH ROD	EA	1
6	40	PAOZZ	1005-01-203-7818	12524165	19200	PUSH ROD, SEAR **NOTE:** Must also install P/N 12524166 and P/N 12524419-2	EA	1
6	41	PAOZZ	5360-00-038-8942	MS24585-1061	96906	SPRING, HELICAL, COMPRESSION	EA	1
6	42	PAOZZ	1005-01-117-9818	12524464	19200	ROD, ROCKER SUPPORT	EA	1
6	43	PAOZZ	1005-01-114-0115	12524460	19200	ROD ASSEMBLY, OPERATING	EA	1
6	44	PAOZZ	1005-01-088-4416	12524470	19200	TRACK, REAR	EA	1
6	45	PAOZZ	5315-01-134-0604	12524618-6	19200	PIN, SPRING	EA	1
6	46	PAOZZ	1005-01-088-4380	12524346	19200	PIN, HANDLE LOCK	EA	1
6	47	PAOZZ	5360-01-128-5644	12524628-4	19200	SPRING, HELICAL, COMPRESSION	EA	1
6	48	PAOZZ	5305-01-115-3744	12524625	19200	SETSCREW	EA	1
6	49	PAOZZ	1005-01-088-4405	12524306	19200	BRACKET, LATCH	EA	1
6	50	PAOZZ	5310-01-118-5693	12524630-2	19200	WASHER, SPRING	EA	1
6	51	PAOZZ	1005-01-088-4406	12524308	19200	HOOK, LATCH-TRACK	EA	1
6	52	PAOZZ	5315-01-057-1490	MS9466-19	96906	PIN, STRAIGHT, HEADED	EA	1
6	54	PAOZZ	1005-01-114-0079	12524292	19200	PIVOT, SEAR RETRACTOR	EA	1
6	55	PAOZZ	1005-01-114-0053	12524295	19200	RETRACTOR ASSEMBLY, SEAR	EA	1
6	56	PAOZZ	5360-01-089-7680	12524628-8	19200	SPRING, HELICAL, COMPRESSION	EA	1

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(1) ILLUSTRATION (a) FIG NO.	(b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASGC - RECEIVER ASSEMBLY 12524300		
6	57	PAOZZ	3110-01-089-7638	12524605	19200	BEARING, BALL, ANNULAR	EA	2
6	58	PAOZZ	3020-01-170-1852	12524257	19200	MATCHED SET OR GEAR	EA	1
6	59	XAOZZ		12524456	19200	. . . GEAR BEVEL	EA	1
6	60	XAOZZ		12524457	19200	. . . GEAR BEVEL	EA	1
6	61	AO000		12524146	19200	CLUTCH ASSEMBLY	EA	1
6	62	PAOZZ	1005-01-089-7787	12524312	19200	. . . SHAFT, SHOULDERED CLUTCH	EA	1
6	63	PAOZZ	5360-01-230-5828	12524147-1	19200	. . . SPRING, CLUTCH	EA	1
6	64	PAOZZ	5360-01-230-5829	12524147-2	19200	. . . SPRING, CLUTCH	EA	1
6	65	PAOZZ	3040-01-230-5850	12524148	19200	. . . GEAR, CLUTCH	EA	1
6	66	PAOZZ	3110-01-089-7640	12524313	19200	. . . ROLLER, BEARING CLUTCH	EA	3
6	67	AO000		12524310	19200	CLUTCH ASSEMBLY	EA	1
6	68	PAOZZ	1005-01-089-7787	12524312	19200	. . . SHAFT, SHOULDERED CLUTCH	EA	1
6	69	PAOZZ	5360-01-089-7686	12524311	19200	. . . SPRING, SPIRAL, TORSION	EA	1
6	70	PAOZZ	3040-01-089-7860	12524314	19200	. . . GEARSHAFT, CLUTCH SPUR	EA	1
6	71	PAOZZ	3110-01-089-7640	12524313	19200	. . . ROLLER, BEARING CLUTCH	EA	1
6	72	PAOZZ	5305-01-122-9638	B18-3-1AH0800100D	56878	SCREW, CAP, SOCKET HE	EA	4
6	73	PAOFD	1005-01-088-4396	12524473	19200	MOTOR, 1.5 HP DC	EA	1
6	74	PAOZZ	5330-00-061-5471	MS9241-133	96906	PACKING, PREFORMED	EA	1
6	75	PAOZZ	3110-01-119-1129	12524607	19200	BEARING, ROLLER, NEEDLE	EA	1
6	76	PAOZZ	3020-01-089-7783	12524459	19200	GEAR CLUSTER, SPUR	EA	1

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP BTASGC - RECEIVER ASSEMBLY 12524300		
6	77	PAOZZ	3110-00-109-1183	12524606	19200	BEARING, BALL, ANNULAR	EA	1
6	78	PAOZZ	1005-01-089-7861	12524363	19200	HOUSING, MECHANICAL	EA	1
6	79	PAOZZ	5305-01-124-7057	B18-3-1AH060025D	56878	SCREW, CAP, SOCKET HE	EA	2
6	80	PAOZZ	5310-01-115-0755	12524617-3	19200	NUT, SELF-LOCKING, HE	EA	1
6	81	PAOZZ	1005-01-089-7790	12524303	19200	SHAFT, SHOULDERED DRIVE SPROCKET	EA	1
6	82	PAOZZ	3020-01-089-7713	12524450	19200	GEAR, SPUR ASSEMBLY	EA	1
6	83	PAOZZ	5330-01-126-7320	12524623	19200	SEAL, PLAIN ENCASED	EA	1

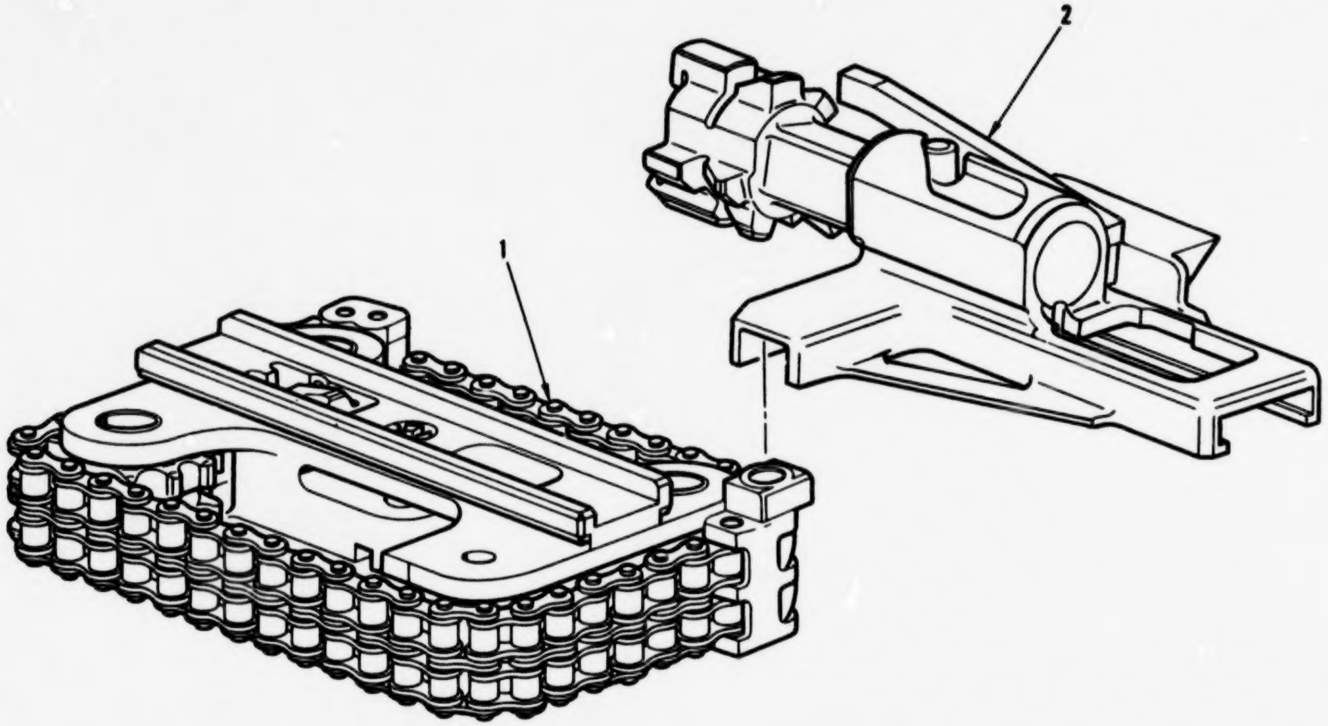

Figure 7. Bolt and track assembly 12524340.

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP BTASGCB - BOLT AND TRACK ASSEMBLY 12524340		
7	1	A0000		12524380	19200	TRACK ASSEMBLY	EA	1
7	2	A0000		12524320	19200	BOLT AND CARRIER ASSEMBLY	EA	1

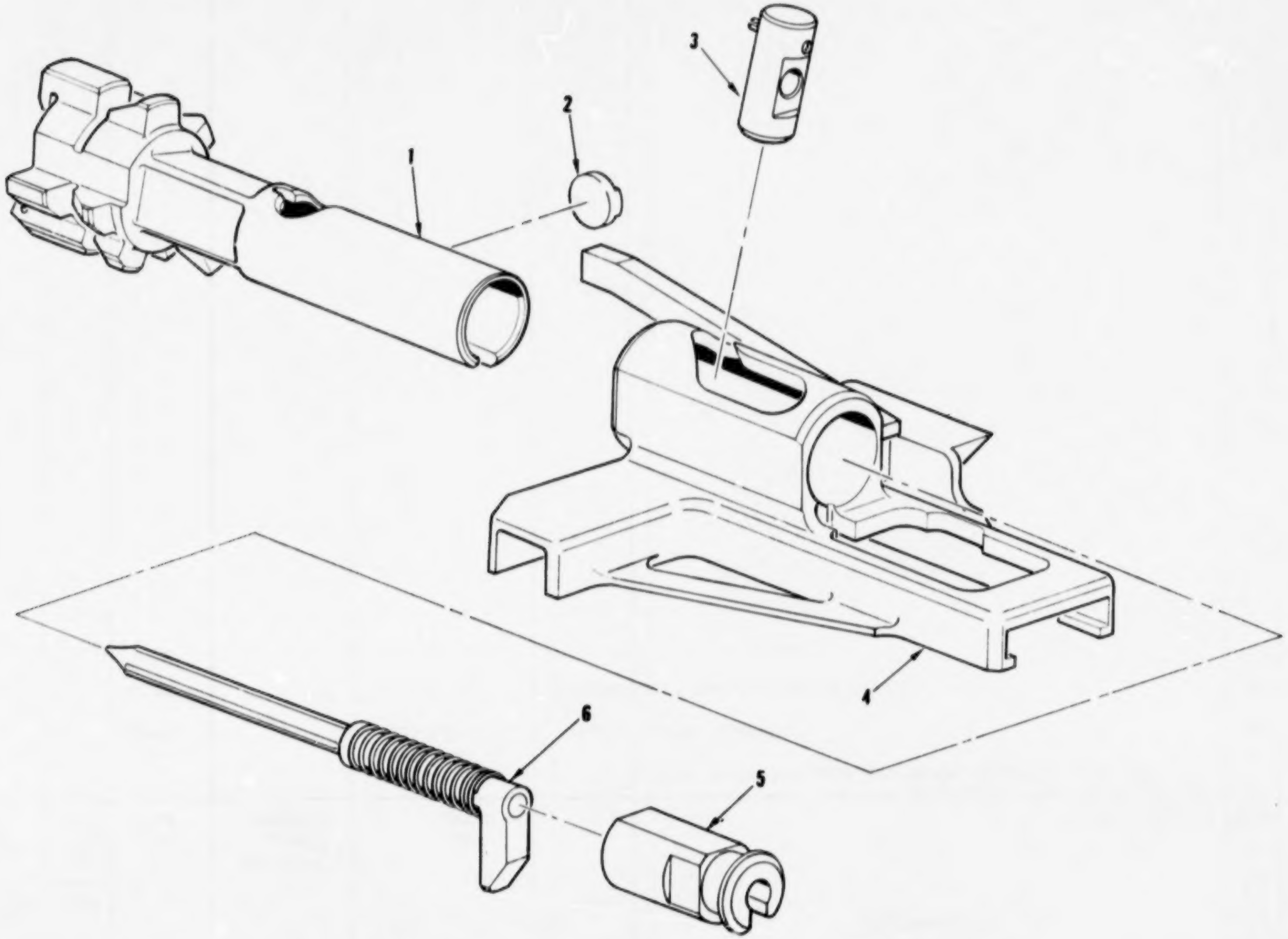

Figure 8. Bolt and carrier assembly 12524320.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP BTASGCBA - BOLT AND CARRIER ASSEMBLY 12524320		
8	1	PAOZZ	1005-01-089-7778	12524331	19200	BOLT ASSEMBLY	EA	1
8	2	PAOZZ	1005-01-089-7738	12524321	19200	KEEPER, FIRING PIN SLEEVE	EA	1
8	3	PAOZZ	1005-01-088-4378	12524335	19200	CAM PIN ASSEMBLY	EA	1
8	4	PAOZZ	1005-01-088-4379	12524338	19200	CARRIER ASSEMBLY	EA	1
8	5	PAOZZ	1005-01-088-9128	12524323	19200	SLEEVE, FIRING PIN	EA	1
8	6	PAOZZ	1005-01-088-4376	12524325	19200	FIRING PIN ASSEMBLY	EA	1

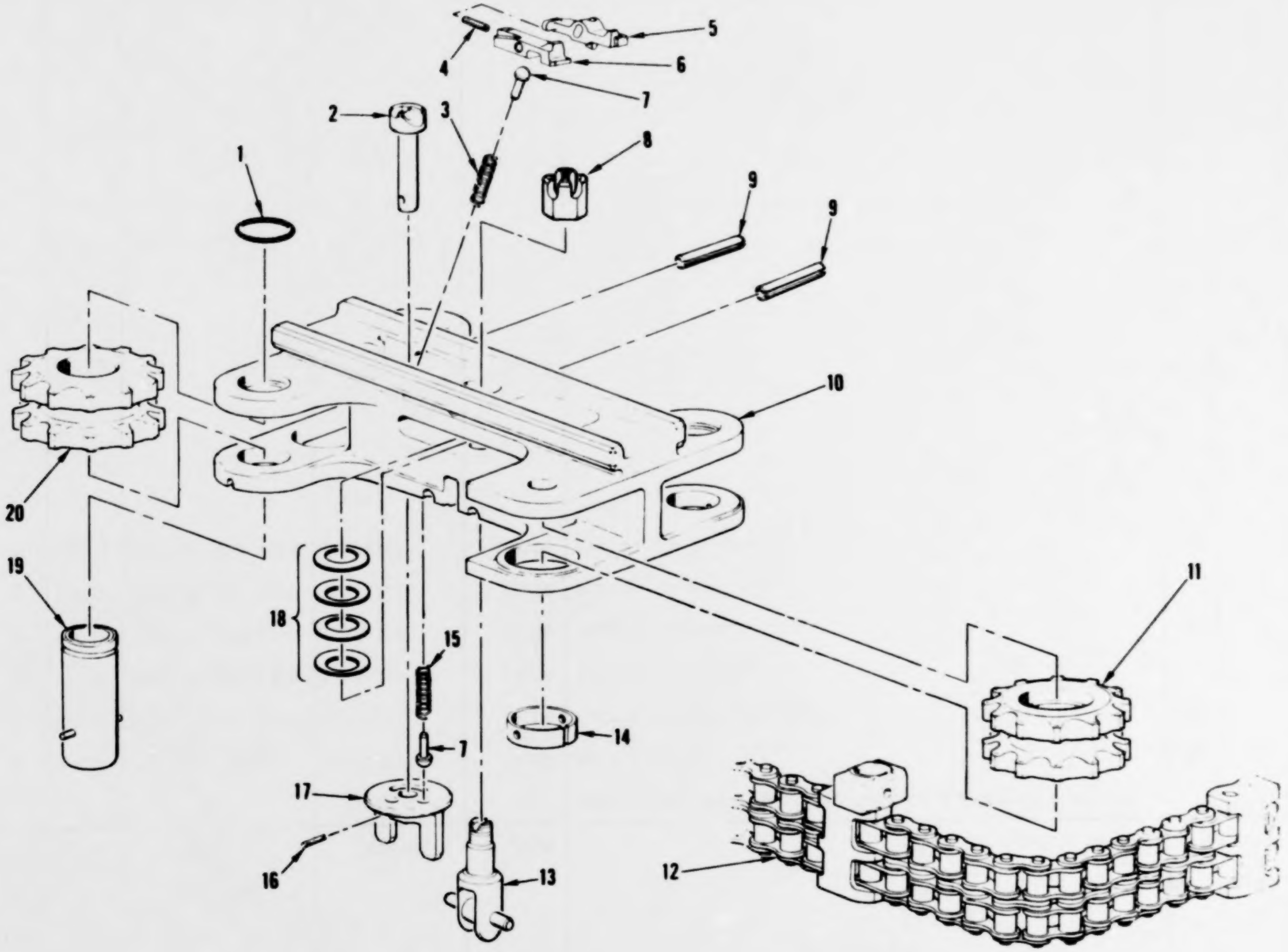
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Figure 9. Track assembly 12524380.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP BTASGCBB - TRACK ASSEMBLY 12524380		
9	1	PAOZZ	5330-00-279-9309	M25988/1-022	96906	PACKING, PREFORMED	EA	3
9	2	PAOZZ	3040-01-167-8325	12524400	19200	ACTUATOR, SAFETY	EA	1
9	3	PAOZZ	5360-01-089-7680	12524628-8	19200	SPRING, HELICAL, COMPRESSION	EA	1
9	4	PAOZZ	5360-01-135-4285	MS24585-1116	96906	SPRING, HELICAL, COMPRESSION	EA	1
9	5	PAOZZ	3040-01-167-8326	12524384	19200	PAWL, SAFETY	EA	1
9	6	PAOZZ	1005-01-089-7774	12524381	19200	PAWL, FIRING PIN	EA	1
9	7	PAOZZ	5315-01-089-7675	12524398	19200	PIN, STRAIGHT, HEADED	EA	2
9	8	PAOZZ	5310-01-089-7747	12524389	19200	NUT, PLAIN ROUND	EA	1
9	9	PAOZZ	5315-00-838-4584	MS16562-66	96906	PIN, SPRING	EA	2
9	10	PAOZZ	1005-01-088-4385	12524390	19200	TRACK, CHAIN ROLLER	EA	1
9	11	PAOZZ	3020-01-089-7692	12524393	19200	SPROCKET, WHEEL	EA	1
9	12	PAOZZ	3020-01-089-7694	12524405	19200	CHAIN, ROLLER ASSEMBLY	EA	1
9	13	PAOZZ	1005-01-088-4384	12524385	19200	CLEVIS ASSEMBLY	EA	1
9	14	PAOZZ	1005-01-088-4386	12524392	19200	RETAINER, SPROCKET, DRIVE	EA	1
9	15	PAOZZ	5360-01-089-7682	12524628-1	19200	SPRING, HELICAL, COMPRESSION	EA	1
9	16	PAOZZ	5315-01-115-0899	12524618-1	19200	PIN, SPRING	EA	1
9	17	PAOZZ	1005-01-089-7782	12524401	19200	HANDLE, SAFETY	EA	1
9	18	PAOZZ		12524610-1	19200	WASHER, SPRING	EA	4
9	19	PAOZZ	1005-01-089-7788	12524395	19200	SHAFT ASSEMBLY, SPROCKET, IDLER	EA	3
9	20	PAOZZ	3020-01-089-7693	12524394	19200	SPROCKET, WHEEL	EA	3

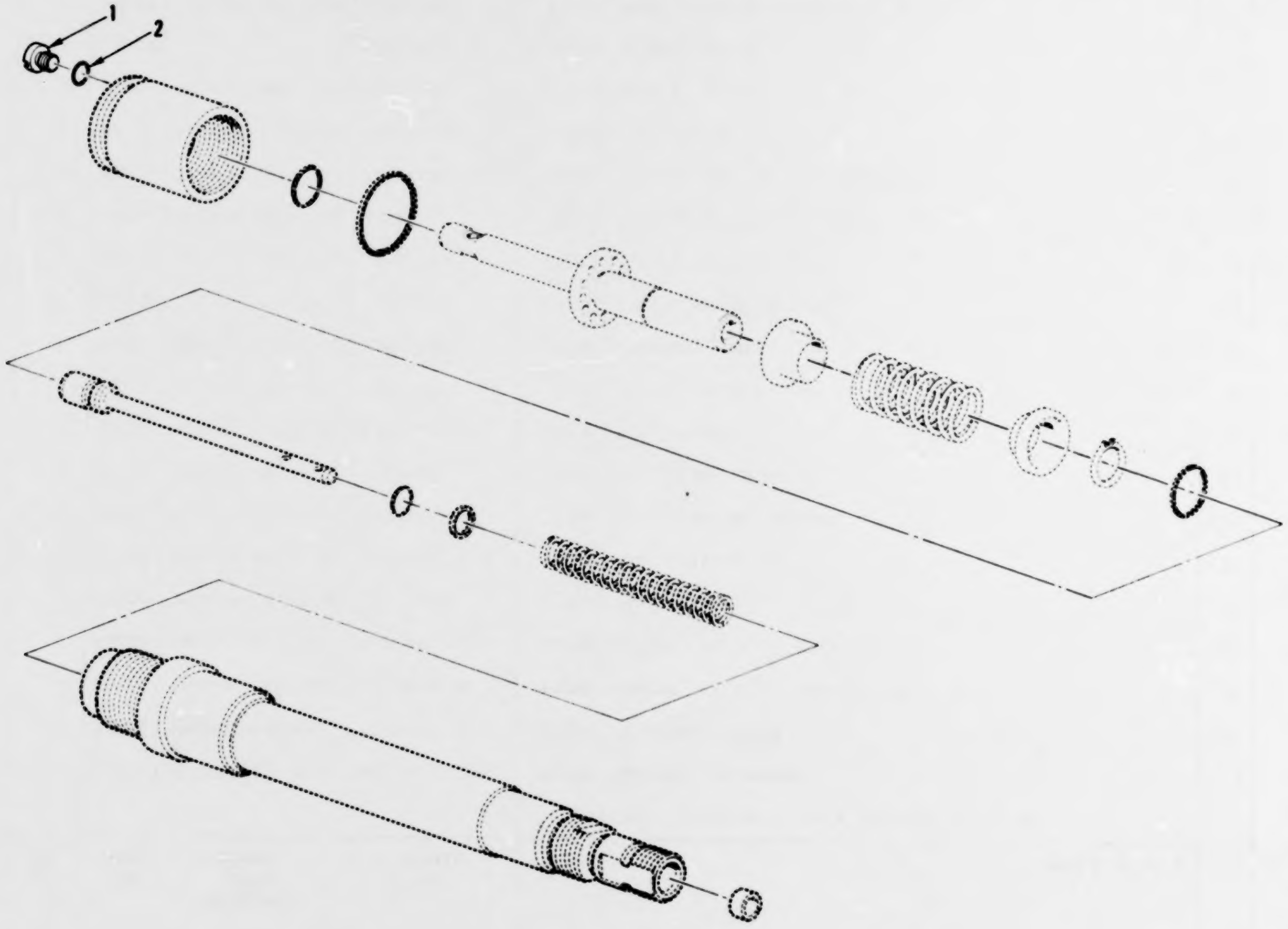


Figure 10. Damper assembly 12524425.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP BTASGCCA - DAMPER ASSEMBLY 12524425		
10	1	PAOZZ	1005-01-089-7679	12524424	12900	PLUG, DAMPER HOUSING	EA	1
10	2	PAOZZ	5330-00-920-9217	NAS1612-2	80205	PACKING, PREFORMED, PART OF KIT P/N 12524030	EA	1

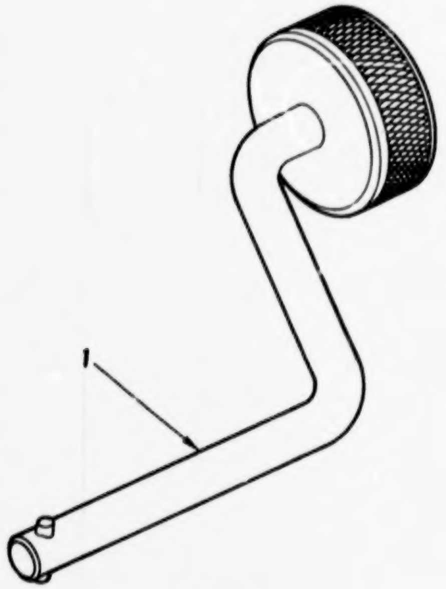


Figure 11. Special Tools.

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	USABLE ON CODE	U/M	QTY INC IN UNIT
11	1	PAOZZ	1005-01-119-7269	12524015	19200	CRANK ASSEMBLY, HAND	EA	1

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.
1005-01-088-4359	1	1
1005-01-088-4361	3	21
1005-01-088-4362	3	24
1005-01-088-4363	3	4
1005-01-088-4364	3	17
1005-01-088-4365	3	11
1005-01-088-4366	3	10
1005-01-088-4367	5	3
1005-01-088-4368	3	20
1005-01-088-4375	4	36
1005-01-088-4376	8	6
1005-01-088-4378	8	3
1005-01-088-4379	8	4
1005-01-088-4380	6	46
1005-01-088-4381	6	37
1005-01-088-4382	6	30
1005-01-088-4384	9	13
1005-01-088-4385	9	10
1005-01-088-4386	9	14
1005-01-088-4387	6	6
1005-01-088-4388	6	3
1005-01-088-4395	4	33
1005-01-088-4396	6	67
1005-01-088-4401	4	34
1005-01-088-4402	4	29
1005-01-088-4405	6	49
1005-01-088-4406	6	51
1005-01-088-4416	6	44
1005-01-088-9128	8	5
1005-01-089-7679	10	1
1005-01-089-7738	8	2
1005-01-089-7770	6	10
1005-01-089-7774	9	6
1005-01-089-7778	8	1
1005-01-089-7782	9	17
1005-01-089-7784	3	16
1005-01-089-7787	6	62
1005-01-089-7788	9	19
1005-01-089-7789	6	26
1005-01-089-7790	6	75
1005-01-089-7856	3	8
1005-01-089-7861	6	72
1005-01-089-7870	3	14
1005-01-097-0252	6	18
1005-01-105-5191	1	2
1005-01-114-0053	6	55
1005-01-114-0079	6	54
1005-01-114-0080	6	15
1005-01-114-0081	6	1
1005-01-114-0082	6	38
1005-01-114-0083	6	39
1005-01-114-0084	6	32
1005-01-114-0115	6	43
1005-01-114-3080	3	3
1005-01-117-9818	6	42
1005-01-119-7252	6	36
1005-01-119-7253	6	34
1005-01-119-7269	11	1
1005-01-119-9819	3	19
1005-01-153-2790	3	6
1005-01-153-2791	3	15
1005-01-153-2792	3	23
3020-01-167-8331	6	28
3020-01-089-7692	9	11
3020-01-089-7693	9	20
3020-01-089-7694	9	12
3020-01-089-7713	6	76
3020-01-089-7783	6	70
3020-01-170-1852	6	58
3040-01-089-7860	6	64
3040-01-167-8325	9	2
3040-01-167-8326	9	5
3110-01-109-1183	6	71
3110-01-089-7638	6	57
3110-01-089-7640	6	65
3110-01-119-1129	6	69
3120-01-089-7727	5	5
5305-01-089-7667	6	19
5305-01-089-7718	4	37
5305-01-115-3744	6	48
5305-01-122-9633	4	7
	5	8
	6	29

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX (cont)

STOCK NUMBER	FIGURE NO.	ITEM NO.
5305-01-122-9634	3	7
5305-01-122-9635	3	12
	6	7
5305-01-122-9637	6	24
5305-01-122-9638	6	66
5305-01-124-7057	3	13
	6	73
5310-00-209-0027	4	32
	5	7
5310-00-982-5000	4	31
5310-01-089-7747	9	8
5310-01-091-3309	6	14
5310-01-115-0755	6	74
5310-01-115-0756	3	1
	5	6
5310-01-118-5693	6	50
5315-00-770-9181	5	4
	6	13
5315-00-838-4584	9	9
5315-00-842-3044	6	2
5315-00-903-5944	6	4
5315-00-990-1338	6	23
5315-01-027-6616	5	1
	6	11
5315-01-057-1490	6	52
5315-01-089-7672	6	9
5315-01-089-7675	9	7
5315-01-115-0899	6	33
	9	16
5315-01-134-0604	6	45
5315-01-157-3064	6	31
5330-00-061-5471	6	68
5330-00-279-9309	9	1
5330-00-920-9217	10	2
5330-00-935-2027	6	5
5330-01-126-7320	6	77
5360-00-038-8942	6	41
5360-00-182-9953	6	12
5360-00-407-8538	4	35
5360-01-089-7680	6	56
	9	3
5360-01-089-7682	9	15
5360-01-089-7686	6	63
5360-01-095-5212	5	2
5360-01-114-0185	6	35
5360-01-128-5644	6	47
5360-01-135-4285	9	4
5365-00-807-7968	6	8
5365-01-089-7735	4	30
5365-01-089-7779	3	18
5365-01-128-5675	3	2
5365-01-139-4490	6	17
6850-00-281-1985	ESML	3
7920-00-205-1711	ESML	4
9150-00-034-0791	ESML	19
9150-00-935-4018	ESML	2
9505-00-847-1663	ESML	1

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX (cont)

PART NUMBER	FSCM	FIG NO.	ITEM NO.
AA-531	58536	ESML	4
AA-711	81348	ESML	3
B18-3-1AH060012D	56878	3	5
		4	7
		5	8
		6	29
B18-3-1AH060020D	56878	3	7
B18-3-1AH060025D	56878	3	13
	56878	6	73
B18-3-1AH060035D	56878	6	24
B18-3-1AH0800100D	56878	6	66
B18-3-1AH080030D	56878	3	12
		6	7
DC-510	71984	ESML	19
125241154	81349	ESML	2
MS16562-66	96906	9	9
MS16625-1068	96906	6	8
MS20002-4	96906	4	32
		5	7
MS20392-2C19	96906	6	23
MS20392-3C39	96906	5	4
		6	13
MS20392-4C41	96906	6	4
MS20995C32	96906	ESML	1
MS21045-C04	96906	4	31
MS24585-1061	96906	6	41
MS24585-1116	96906	9	4
MS24585-1136	96906	4	35
MS24585-1281	96906	6	12
MS24665-132	96906	5	1
		6	11
MS24665-283	96906	6	2
MS9241-133	96906	6	68
MS9466-19	96906	6	52
M25988/1-022	96906	9	1
M27426-2105D	81349	6	17
NAS1611-326	80205	6	5
NAS1612-2	80205	10	2
12524001	19200	1	1
12524002	19200	2	1
12524015	19200	11	1
12524029	19200	6	78
12524065	19200	3	20
12524066	19200	3	6
12524067	19200	3	15
12524068	19200	3	23
12524070	19200	6	28
12524085	19200	6	37
12524086	19200	6	30
12524089	19200	6	27
12524100	19200	1	2
12524102	19200	3	14
12524103	19200	3	19
12524110	19200	3	8
12524115	19200	3	21
12524116	19200	3	24
12524120	19200	3	16
12524134	19200	3	4
12524136	19200	3	18
12524137	19200	3	2
12524138	19200	3	3
12524140	19200	3	17
12524147-1	19200	6	63
12524147-2	19200	6	64
12524148	19200	6	65
12524150	19200	3	11
12524155	19200	3	10
12524160	19200	3	9
12524161	19200	5	5
12524162	19200	5	2
12524163	19200	5	3
12524165	19200	6	40
12524166	19200	6	25
12524189	19200	4	37
12524208	19200	4	33
12524228	19200	4	36
12524257	19200	6	58
12524275	19200	4	34
12524280	19200	4	29
12524292	19200	6	54
12524295	19200	6	55
12524300	19200	1	3
12524302	19200	6	26
12524303	19200	6	75
12524305	19200	6	9

Section IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX (cont)

PART NUMBER	FSCM	FIG NO.	ITEM NO.
12524306	19200	6	49
12524308	19200	6	51
12524310	19200	6	61
12524311	19200	6	63
12524312	19200	6	62
12524313	19200	6	65
12524314	19200	6	64
12524320	19200	7	2
12524321	19200	8	2
12524323	19200	8	5
12524325	19200	8	6
12524331	19200	8	1
12524335	19200	8	3
12524338	19200	8	4
12524340	19200	6	16
12524343	19200	6	10
12524346	19200	6	46
12524350	19200	6	1
12524358	19200	6	19
12524359	19200	6	18
12524363	19200	6	72
12524370	19200	6	15
12524379	19200	6	14
12524380	19200	7	1
12524381	19200	9	6
12524384	19200	9	5
12524385	19200	9	13
12524389	19200	9	8
12524390	19200	9	10
12524392	19200	9	14
12524393	19200	9	11
12524394	19200	9	20
12524395	19200	9	19
12524398	19200	9	7
12524400	19200	9	2
12524401	19200	9	17
12524405	19200	9	12
12524419	19200	6	20
12524419-1	19200	6	21

PART NUMBER	FSCM	FIG. NO.	ITEM NO.
12524419-2	19200	6	22
12524420	19200	6	6
12524422	19200	6	3
12524424	19200	10	1
12524433	19200	6	39
12524439	19200	5	23
12524450	19200	6	76
12524456	19200	6	59
12524457	19200	6	60
12524459	19200	6	70
12524460	19200	6	43
12524461	19200	6	38
12524463	19200	6	32
12524464	19200	6	42
12524465	19200	6	36
12524466	19200	6	34
12524470	19200	6	44
12524473	19200	6	67
12524474	19200	4	30
12524605	19200	6	57
12524606	19200	6	71
12524607	19200	6	69
12524610-1	19200	9	18
12524617-1	19200	3	1
		5	6
12524617-3	19200	6	74
12524618-1	19200	6	33
		9	16
12524618-6	19200	6	45
12524619-6	19200	6	31
12524623	19200	6	77
12524625	19200	6	48
12524628-1	19200	9	15
12524628-4	19200	6	47
12524628-7	19200	6	35
12524628-8	19200	6	56
		9	3
12524630-2	19200	6	50
12524641	19200	2	2

APPENDIX D

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the M242 gun. These items are authorized to you by CTA 50-970, Expendable Items (except Medical, Class V, Repair Parts, and Heraldic Items).

D-2. EXPLANATION OF COLUMNS

a. Column 1 - Item number. This number is assigned to the entry in the listing and is referenced under the Materials/Parts heading on the task initial setup page to identify the material required (e.g., Grease, MIL-G-21164 (Item 2, App D)).

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

O - Organizational Maintenance

c. Column 3 - National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column 4 - Description. Indicates the Federal item name and, if required, a description to identify the item. The next line for each item indicates the Government specification, or a part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

APPENDIX D

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	O	9505-00-293-4208	Wire, Nonelectrical, MS20995C32 1 lb spool CRES, 0/032-inch	LB
2	O	9150-00-223-4004	Grease, Molybdenum Disulfide MIL-G-21164 6.5 lb can	OZ
3	O	6850-00-281-1985	Solvent, Dry-cleaning A-A-711 1 gal can	OZ
4	O	7920-00-205-1711	Rag, Wiping A-A-531 50 lb bale	EA
5	O	8030-00-252-8301	Compound, Fingerprint Remover MIL-C-15074 5 gal drum	OZ
6	O	9150-00-231-9062	Oil, Lubricating Preservative VV-L-800 type P-9 5 gal can	OZ
7	O	1005-00-288-3565	Swab, Small Arms Cleaning No. 5019316 200 unit qty/bundle	EA
8	O	4710-00-203-7789	Tube, Metallic, Aluminum Alloy WW-T-700-6 8 x 5/8 inch	IN
9	O	8135-00-810-0485	Packing Material, Volatile Corrosion Inhibitor (VCI) MIL-P-3420 Style C Class 1 600 ft roll	FT

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST (cont)

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
10	O	7510-00-663-3732 (8135)	Tape, Packing PPP-T-60 72 yd roll	FT
11	O	8135-00-753-4661	Barrier Material, Greaseproof and Waterproof MIL-B-121 Grade A 300 ft roll	FT
12	O	8105-00-409-0378	Barrier Bag, Water MIL-B-117 Type 1 Class F Qty 50 per bundle	EA
13	O	8135-00-285-4748	Strapping, Flat Steel QQ-S-781 Type 1 Class 1, Finish A 0.75 x 0.02 inch 100 lb coil	FT
14	O	8010-00-160-5852	Varnish, Oil TT-V-121 1 gal can	OZ
15	O	8010-00-290-6159	Lacquer MIL-C-17504 1 gal can	OZ
16	O	8010-00-285-4916	Paint, Black Enamel MS35595-1 1 pt can	PT
17	O	8010-00-297-0800	Enamel, Sand Color Alkyd, Lusterless, TT-E-515 1 gal can	OZ
18	O	7510-00-161-0811	Ink, Stencil TT-I-1795 1 gal can	OZ
19	O	9150-01-056-9047	Fluid, Damper, DC 510 8 lb container	OZ

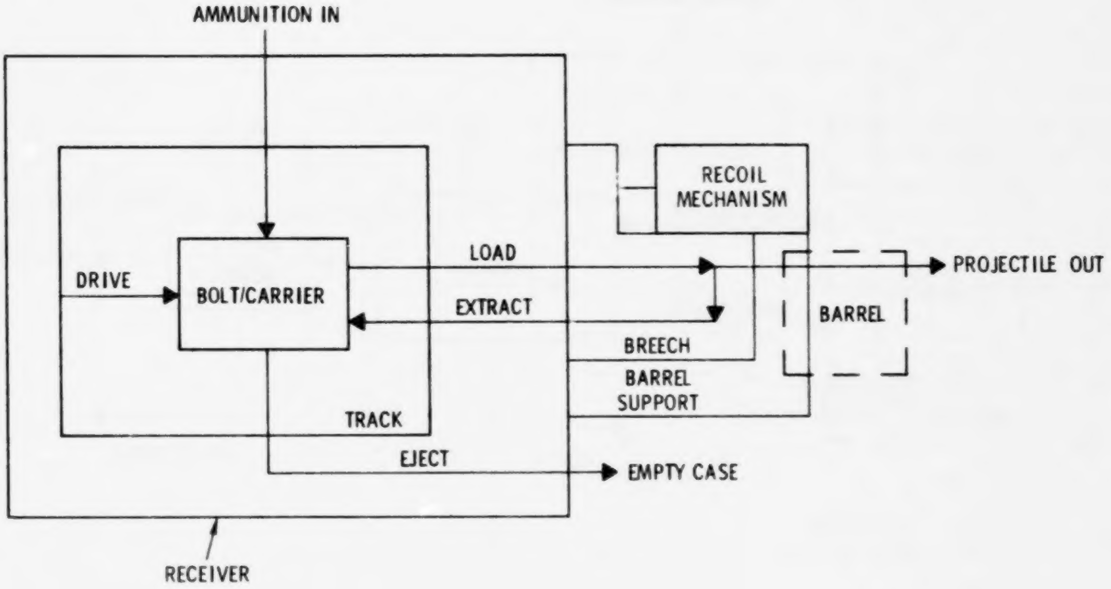
Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST (cont)

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
20	O	9150-00-261-7899	Penetrating Oil VV-P-216 1 pt can	OZ
21	O	5315-00-194-2455	Pin, Lock AN 415-2	EA
22	O	3439-00-288-1469	Rod, Welding 1/8 in. x 12 in. (3mm x 300mm) MIL-R-5031	EA
23	O	8030-00-891-8358	Sealing Compound MIL-R-46082 8 oz bottle	OZ

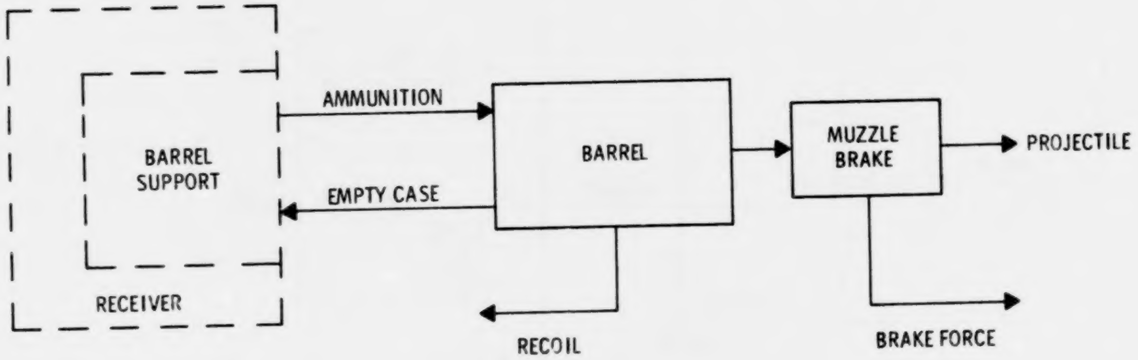
APPENDIX E

SUPPORT DIAGRAMS

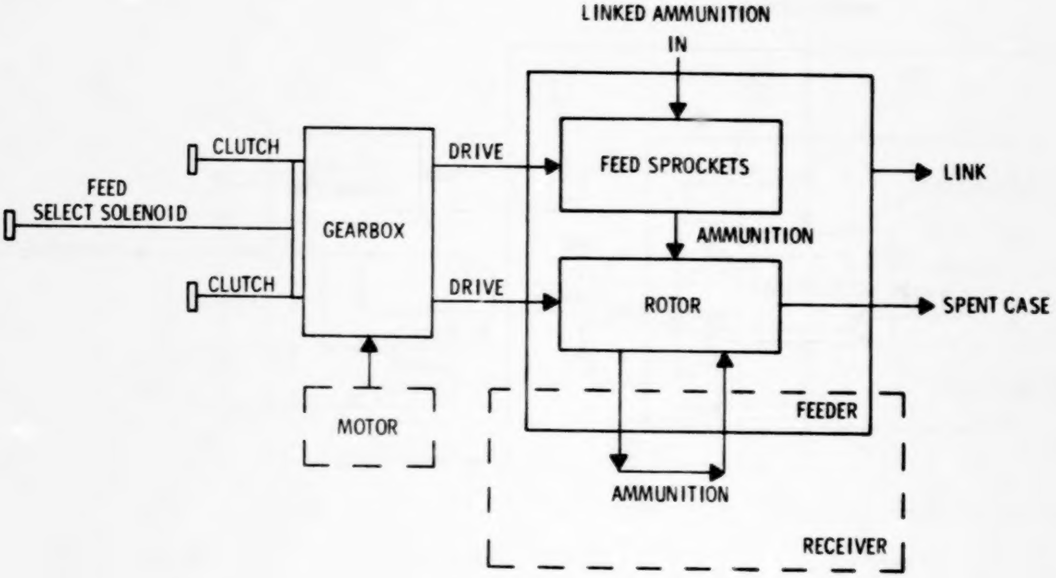
E-1. M242 25-MM AUTOMATIC GUN


AMMUNITION IN
RECOIL
MECHANISM
LOAD
PROJECTILE OUT
DRIVE
BOLT/CARRIER
EXTRACT
BARREL
BREECH
BARREL
SUPPORT
TRACK
EJECT
EMPTY CASE
RECEIVER

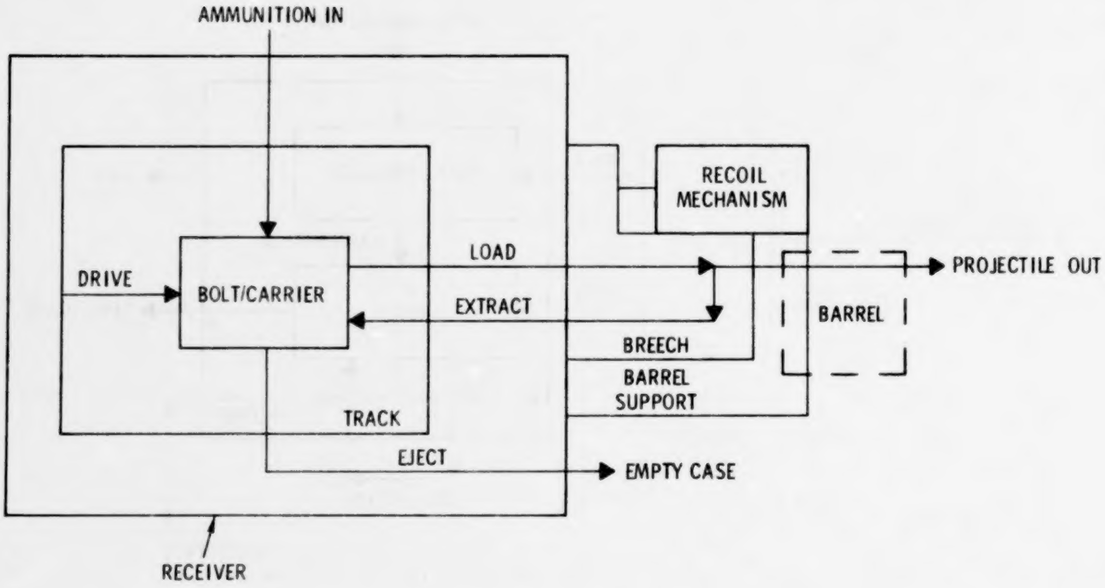
E-2. BARREL ASSEMBLY


AMMUNITION
BARREL SUPPORT
EMPTY CASE
RECEIVER
BARREL
MUZZLE BRAKE
PROJECTILE
RECOIL
BRAKE FORCE

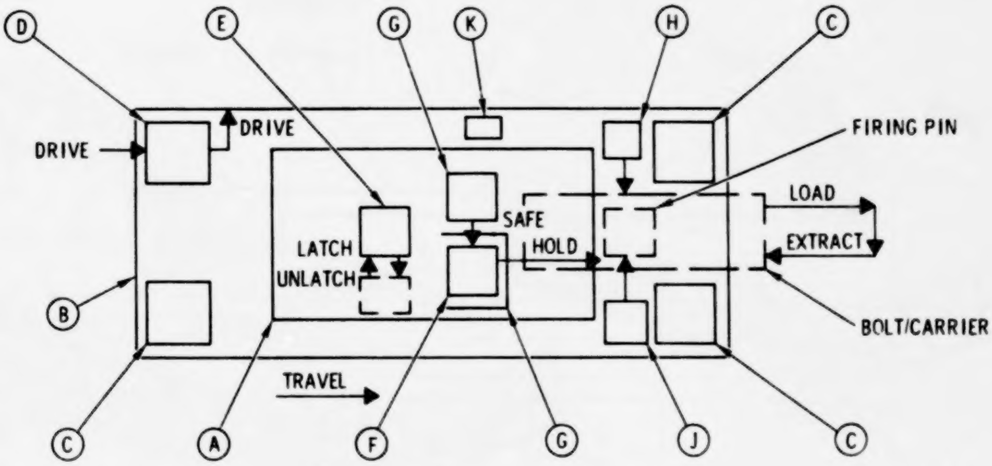
E-3. FEEDER ASSEMBLY


LINKED AMMUNITION
IN
CLUTCH
FEED
SELECT SOLENOID
CLUTCH
GEARBOX
DRIVE
DRIVE
FEED SPROCKETS
AMMUNITION
ROTOR
LINK
SPENT CASE
MOTOR
FEEDER
AMMUNITION
RECEIVER

E-4. RECEIVER ASSEMBLY


AMMUNITION IN
RECOIL MECHANISM
LOAD
DRIVE
BOLT/CARRIER
EXTRACT
PROJECTILE OUT
BARREL
BREECH
BARREL SUPPORT
TRACK
EJECT
EMPTY CASE
RECEIVER

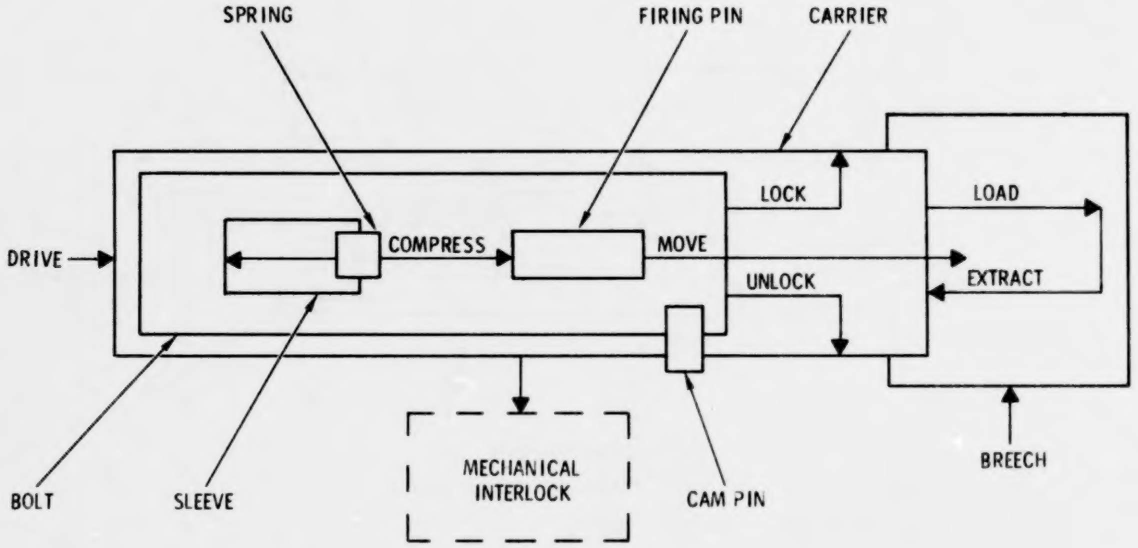
E-5. TRACK ASSEMBLY


Ⓓ
Ⓔ
Ⓖ
Ⓚ
Ⓗ
Ⓒ
DRIVE
DRIVE
FIRING PIN
SAFE
LOAD
LATCH
HOLD
EXTRACT
UNLATCH
Ⓑ
BOLT/CARRIER
TRAVEL
Ⓒ
Ⓐ
Ⓕ
Ⓖ
Ⓙ
Ⓒ

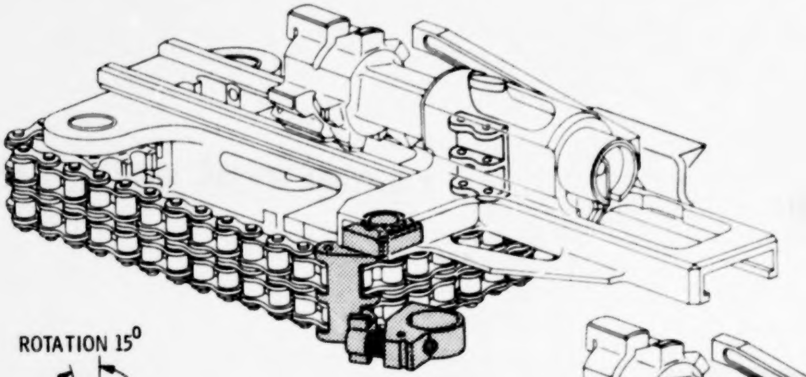
Ⓐ TRACK
Ⓑ CHAIN
Ⓒ IDLER SPROCKETS
Ⓓ DRIVE SPROCKET
Ⓔ LATCH CLEVIS

Ⓕ FIRING PIN PAWL
Ⓖ FIRING PIN PAWL HOUSING
Ⓗ SAFETY
Ⓙ MASTER LINK AND SLIDER
Ⓚ SAFETY LINK

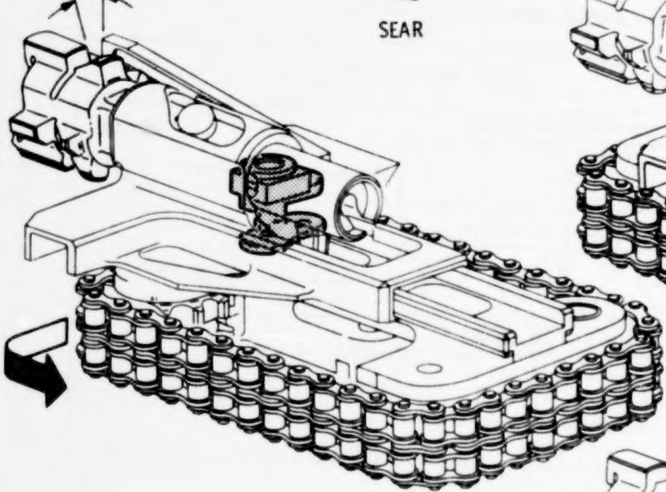
E-6. BOLT AND CARRIER ASSEMBLY


SPRING
FIRING PIN
CARRIER
LOCK
LOAD
DRIVE
COMPRESS
MOVE
EXTRACT
UNLOCK
MECHANICAL INTERLOCK
BOLT
SLEEVE
CAM PIN
BREECH

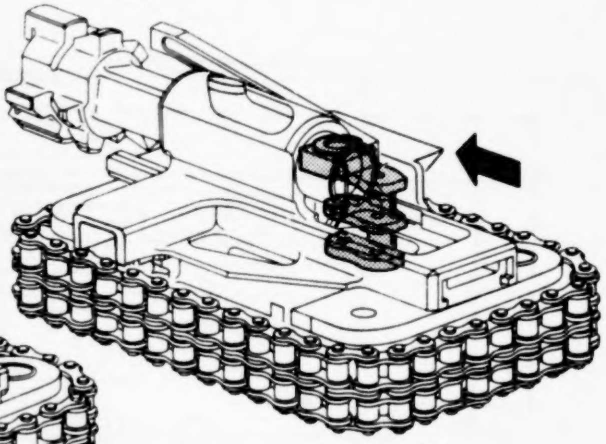
E-7. BOLT/CARRIER/TRACK CYCLE



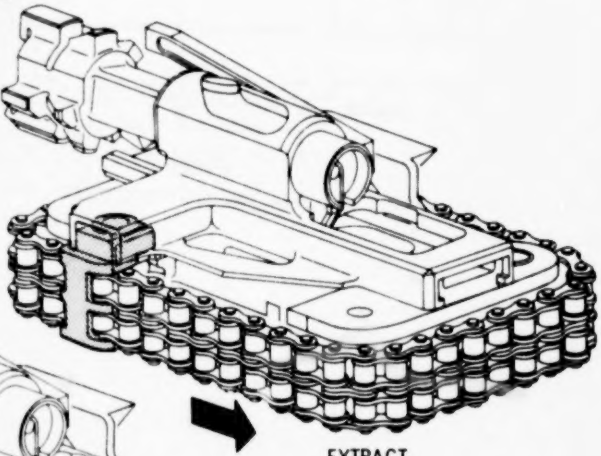
SEAR



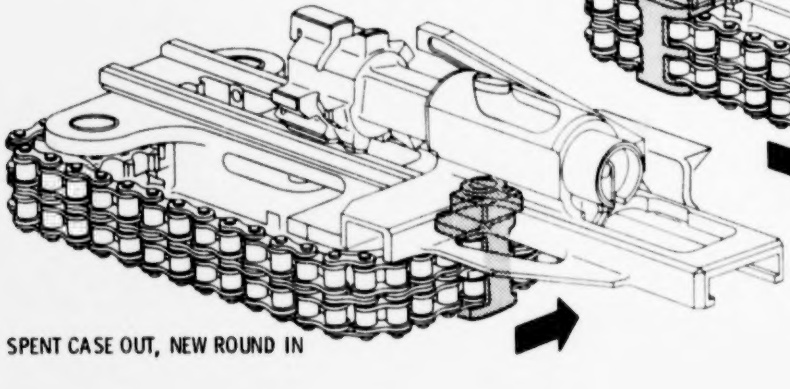
LOCK AND FIRE



RAM AND EJECT

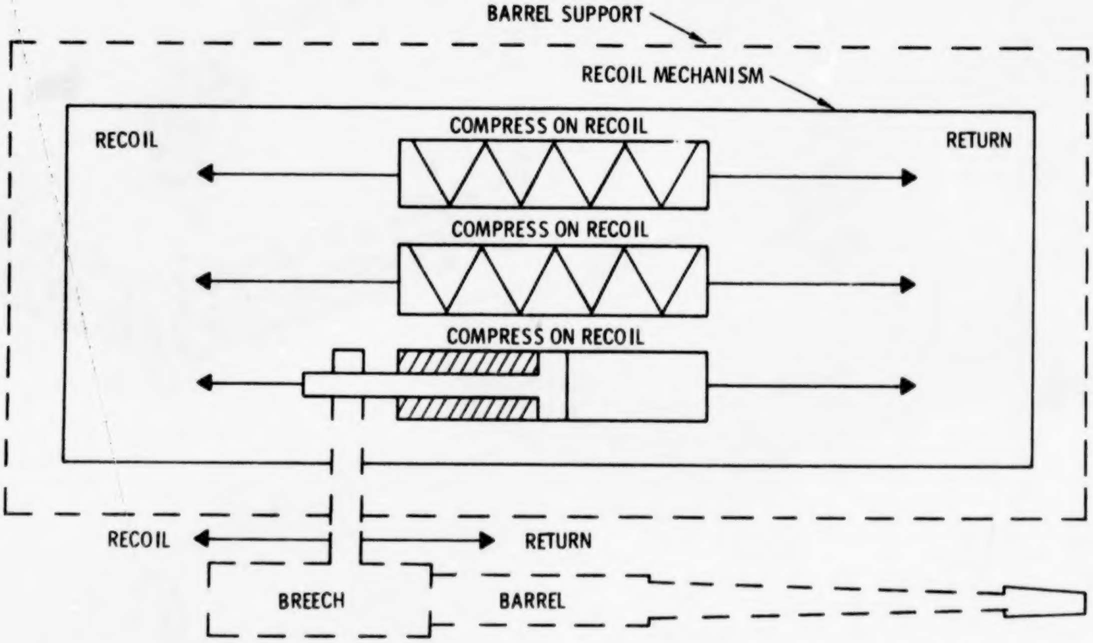


EXTRACT

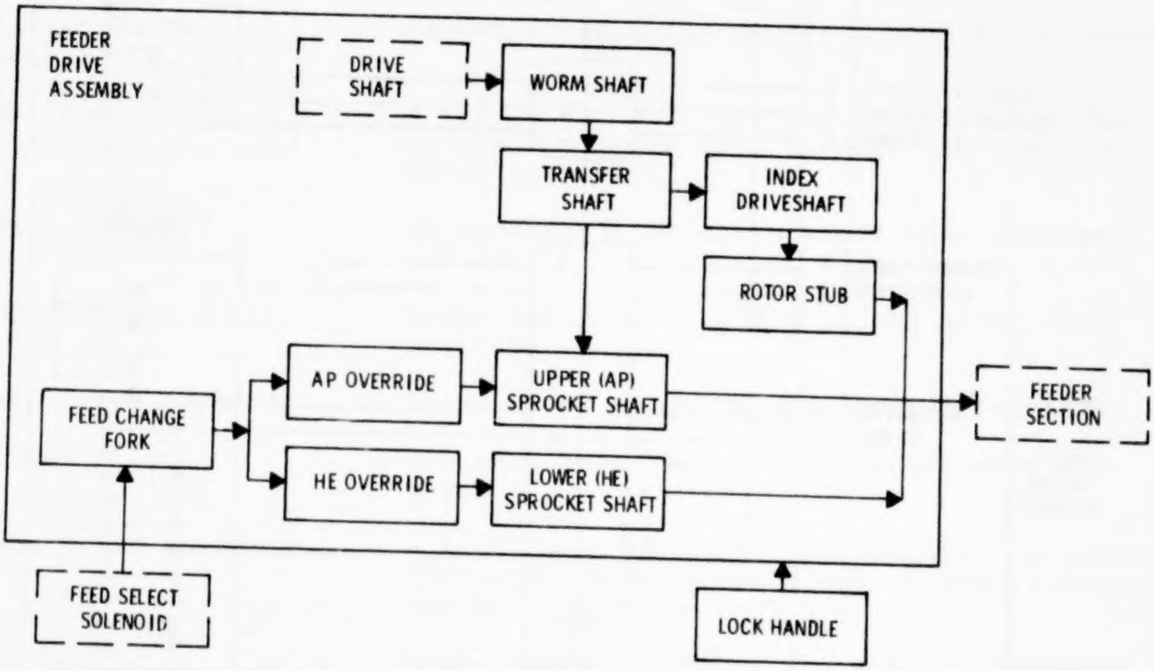


SPENT CASE OUT, NEW ROUND IN

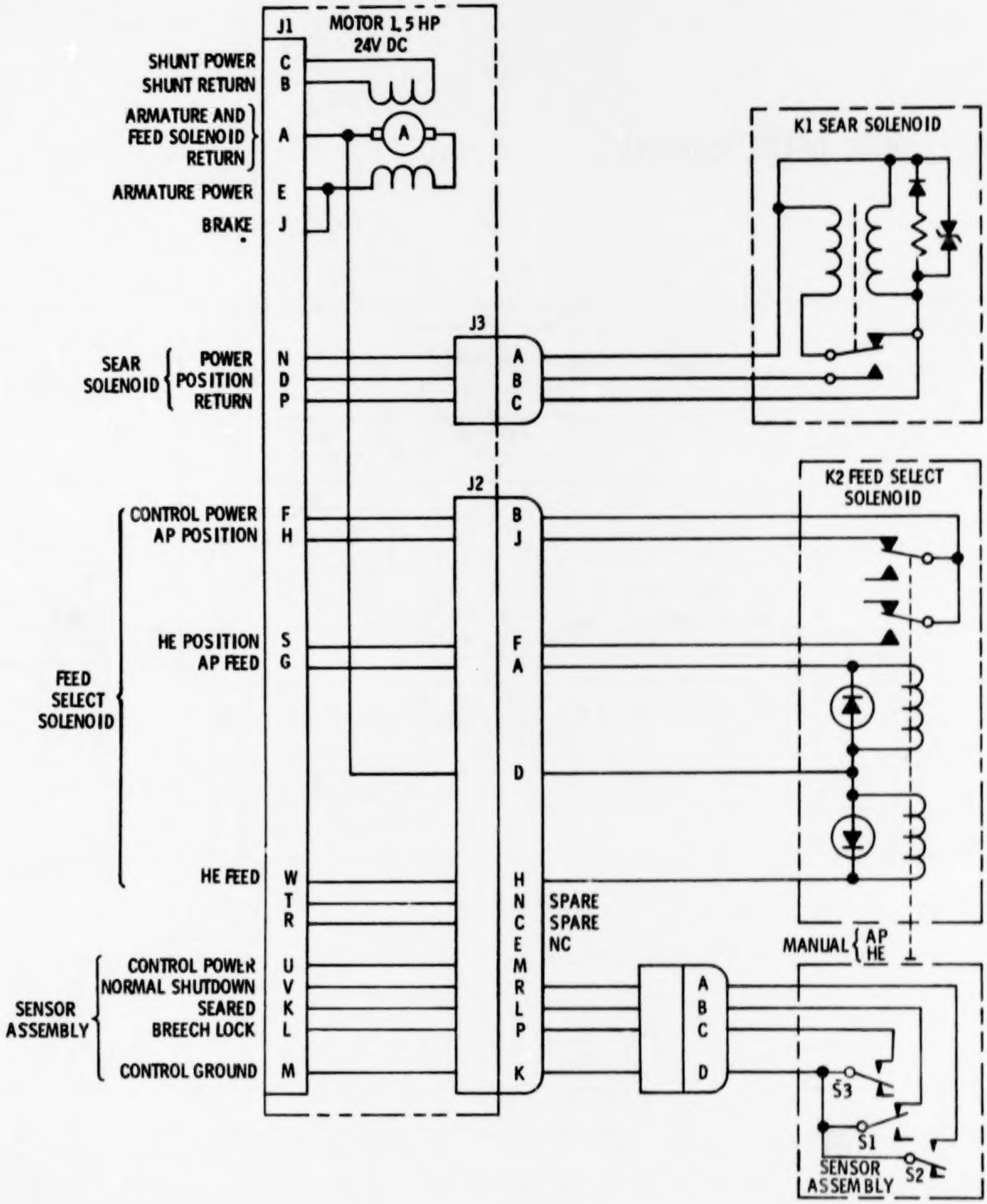
E-8. RECOIL MECHANISM


BARREL SUPPORT
RECOIL MECHANISM
RECOIL
COMPRESS ON RECOIL
RETURN
COMPRESS ON RECOIL
COMPRESS ON RECOIL
RECOIL
RETURN
BREECH
BARREL

E-9. FEEDER DRIVE ASSEMBLY


FEEDER DRIVE ASSEMBLY
DRIVE SHAFT
WORM SHAFT
TRANSFER SHAFT
INDEX DRIVESHAFT
ROTOR STUB
AP OVERRIDE
UPPER (AP) SPROCKET SHAFT
FEEDER SECTION
FEED CHANGE FORK
HE OVERRIDE
LOWER (HE) SPROCKET SHAFT
FEED SELECT SOLENOID
LOCK HANDLE

E-10. ELECTRICAL WIRING DIAGRAM


J1
MOTOR 1.5 HP
24V DC
SHUNT POWER C
SHUNT RETURN B
ARMATURE AND FEED SOLENOID RETURN A
ARMATURE POWER E
BRAKE J
A
K1 SEAR SOLENOID
J3
SEAR SOLENOID
POWER N A
POSITION D B
RETURN P C
J2
K2 FEED SELECT SOLENOID
FEED SELECT SOLENOID
CONTROL POWER F B
AP POSITION H J
HE POSITION S F
AP FEED G A
D
HE FEED W H
T N SPARE
R C SPARE
E NC
SENSOR ASSEMBLY
CONTROL POWER U M A
NORMAL SHUTDOWN V R B
SEARED K L C
BREECH LOCK L P D
CONTROL GROUND M K
MANUAL AP HE
S3
S1
S2
SENSOR ASSEMBLY

APPENDIX F

DEFINITIONS OF UNUSUAL TERMS

Chain Assembly	- An endless series of connected links that move the bolt and carrier assembly
Chain Sear Catch	- Prevents chain from rotating backwards
Control Cam	- Shows whether bolt is in SEAR, FEED, RAM, FIRE, DWELL, MISFIRE, or EXTRACT position
Distributor	- Sends electrical signals to indicate bolt position
Ejection Chute Assembly	- Guides fired cases to eject port on receiver
Eject Rod	- A rod on the bolt and carrier assembly that pushes the fired case through the ejection chute assembly
Feeder Assembly	- An assembly that moves ammunition through the gun
Feeder Handle Latch	- Locks the feeder handle in the up or down position
Gear Clutch Assembly	- Turns upper sprocket and index drive shaft
Hex Key	- A wrench that fits into a socket head cap screw
Index Drive Assembly	- A section of the gun that contains sprocket and rotor drive gears, feed select clutches, and bolt position indicator
Lock Handle	- Locks feeder assembly to receiver assembly
Mechanical Interlock	- Stops gun from cycling if round does not fire
Receiver Assembly	- Provides a mount for barrel assembly and feeder assembly; fires rounds, extracts and pushes spent case through ejection chute
Recoil	- The gun's rearward movement caused by the firing of a round - also called "kick"
Recoil Mechanism	- Absorbs most of the gun recoil
Rotor Assembly	- A three-chamber part that moves ammunition across the bolt

Rotor Stub	- Turns rotor
Round	- One loaded cartridge
Round Positioner	- A triangular piece of metal that guides live ammunition from link to rotor in the feeder assembly
Sear Assembly	- Locks the bolt and carrier assembly to the rear position
Solenoid	- A small cylinder containing an electrically operated plunger
Spin Handle	- A one-hand spin-style socket wrench handle
Spline	- A ridge on a shaft or inside a tube
Spring Washers	- Dished washers that act as a spring when placed back-to-back and compressed
Sprocket	- The gun has two types: a. A notched wheel that drives or guides the chain b. A part that takes a round from the link and guides it past the round positioner into the rotor
Standoff	- Shaft on feeder between index housing and forward feed assembly
Torque	- A force that causes rotation or a twisting motion. It can also cause a wrenching action
Wave Washer	- Washer that acts as a spring when compressed
Worm Gear	- Turns transfer shaft

ALPHABETICAL INDEX

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Distribution:

To be distributed in accordance with DA Form 12-37, Organizational Maintenance requirements for IFV Main Gun (Bushmaster).

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PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.	IN THIS SPACE TELL WHAT IS WRONG
	2-46			Add - Grease, MIL-21164, to Materials/Parts List on setup page.
	2-53			Mechanical interlock recoil rocker spring callout in installation step 3b should be (10) same as in illustration M24-011-27A.

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METRIC/US CUSTOMARY MEASUREMENT CONVERSION INFORMATION

UNITS OF MEASURE

When units of length, weight, torque, or pressure are used in this manual, both metric and US customary units are shown. Metric units are shown first, with the approximate equivalent US customary units in parentheses. Differences between metric and US customary measurement units are shown below with unit symbols for each.

Approximate conversion factors are included for changing metric units into US customary units.

LENGTH

Millimeters 25.40 mm .... 1 inch (in.)

WEIGHT

Kilograms 0.4536 kg .... 1 pound (lb)

PRESSURE

Kilograms per centimeters squared 0.07 Kg/cm^2 ....1 pound(s) per square inch (psi)

CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Millimeters	inches	0.0394
Centimeters	inches	0.394
Kilograms	pounds	2.205
Centimeter-kilograms	inch-pounds	0.869
Kilopascals	pounds per square inch	0.145

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